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CONTENTS

1 SUMMARY

1.1 INTRODUCTION

Between June 4th and July 15th, 2018, the authors conducted the third and final campaign of the Mycenaean Northeast Kopaïs (MYNEKO) Test Program's archaeological fieldwork. Authority was granted to them with permit number ΥΠΠΟΑ / ΓΔΑΠΚ / ΔΙΠΚΑ / ΤΕΕΑΕΙ / 249824 / 178721 / 5474 / 936 / 7-6-2018 (ΑΔΑ: ΩΜΥΩ4653Π4-2Δ2) issued to Dr. Kountouri by the Central Archaeological Council (C.A.C.) of the H.M.C.S. Funding for field operations came from a generous Renewed Research Grant from the Institute for Aegean Prehistory (INSTAP). A Senior Archaeology Award (no. 1732642) to Dr. Lane from the U.S. National Science Foundation (N.S.F.) funded the comparative scientific chronometry of certain discovered features.

1.2 AIMS AND OBJECTIVES

MYNEKO's overarching aim was to create a methodological and evidentiary bridge from Dr. Kountouri's prior investigation of the Late Helladic (L.H.) drainage system in the northeastern Kopaïs and Dr. Lane's exploration of the connected irrigated agricultural system (AROURA survey) to expanded research of the relationship of the littoral sites of Aghios Ioannis (A.I.) and Aghia Marina Pyrghos (A.M.P.) with hydraulic engineering in the plain. The former's specific objectives were to clarify the manner in which the Melas and Kephissos Rivers were channeled and controlled, particularly as they were directed toward the karstic sinkholes in the far northeastern corner of the Kopaic Basin, as well as to explore the relationship between A.I. and an adjacent sinkhole, the Spitia. Dr. Lane's objectives were, on the one hand, to excavate in plan and section, and more precisely to date, features of the irrigated field system, and, on the other, to test the archaeological potential of A.M.P. for answering questions about the socio-economic relationship of this site with the agricultural intensification evident in the plain (the bed of erstwhile Lake Kopaïs) and with the L.H. IIIB Period fortress of Glas, which sits in the middle of this plain and encloses food stores of unparalleled size. He is just as interested in the shifting relationships in this constellation from the period before the hydraulic works were completed all the way to that after their abandonment and ruin.

1.3 GOALS AND ACCOMPLISHMENTS

Dr. Kountouri's fieldwork goals in 2018 were to shift the focus of excavations from the late Middle Helladic (M.H.) to early L.H. cemeteries at A.I., which she and her crew had salvaged, mainly in 2017, back to the L.H. settlement evidence, which she had first discovered in 2016. She also sought to investigate more deeply deposits that appeared to underlie one of the cemeteries at the end of the 2017 campaign. Dr. Lane's goals were to gain a more complete picture of the relationship of the M.H. II–III settlement discovered at A.M.P. and subsequent infant cemetery therein with the extant inner fortification wall, as well as of the sequence of L.H. III buildings on A.M.P.'s summit. In addition, having excavated, on behalf of Dr. Kountouri, into the ancient retaining wall of the channeled rivers in 2017, an objective was to complete his investigations on the plain by excavating on the Mycenaean polder dike, which protected the land around Glas from the Kopaic Lake, to understand better how it was constructed, how irrigation water could have been managed through it, and how old it is. Both collaborators' sets of objectives were achieved. Dr. Lane particularly benefitted from magnetometry prospection carried out both on the plain and at A.M.P. by Prof. Gregorios Tsokas and his colleagues from the Aristotle University of Thessaloniki (A.U.T.; see Appendix A).

In the laboratories of the Archaeological Museum of Thebes, both Dr. Kountouri and Dr. Lane aimed to complete their records of all finds and being, if not finish, all the specialist analyses of finds of various kind (a process that the former at initiated in the winter of 2017–2018). Dr. Lane and his crew completed their summary catalogue of finds for all three years of MYNEKO (2016–18) and the record of the decorated pottery sample collection, except for its final database

entry. He invited bioarchaeologist Oliva Jones of Groningen University to examine all the infant skeletal remain recovered, which she did (see Appendix B), and he allowed Vernon Stafford, graduate student at the University of Tennessee to assemble select potsherds for organic residue analyses, for which Mr. Stafford has applied to the C.A.C. for permission.

1.4 PARTICIPANTS AND DUTIES

Dr. Lane oversaw all fieldwork on the plain and at A.M.P. Dr. Kountouri supervised all other fieldwork at A.I., except for mapping with D.G.N.S.S. (see 2.1). The Greeks under the direction of the latter spent 15 days in the field. The American–Swiss team under the former divided the permit period between 15 days in the field and 15 in the museum laboratory.

Drs. Euterpi Ralli and Kostas Theodoridis were Dr. Kountouri's excavation supervisors at A.I. Eleven students and alumni from the Departments of History and Archaeology at the Universities of Ioannina and Crete and three skilled laborers also participated. The architectural engineer Mrs. Vassiliki Savvatianou undertook the architectural survey, while Mr. Theodoris Hadjitheodorou conducted the topographical survey with optical instruments. Mr. Giorgos Katsoudas participated too, as conservator, for a period of 10 days, not only handling the delicate ceramics after excavation but also helping to recover them. Photographer Mr. Kostas Xenakis carried out aerial photography after the completion of the excavation. The study of the botanical and other organic remains has been assumed by Dr. Evi Margariti, Assistant Professor of Science and Technology at the Research Center of Science and Technology in Archaeology (EKETA) of the Institute of Cyprus. Moreover, Dr. Panaghiotis Karkanas,
Director of the Wiener Laboratory of the American School of Classical Studies at Athens, visited the excavation field and took samples for micromorphological analyses.

The test trench supervisors at A.M.P. were Dr. Kyle Jazwa of Duke University, with Mr. Andrew Gibson and Mr. Damian Koropeckyj (alumn) of UMBC serving as occasional substitutes, and Dr. Laetitia Phialon of the University of Friborg. Mr. Cory Palmer of Brandeis University, Ms. Irene Nolan and Ms. Virginia Moyer of UMBC (alumn), and Ms. Allison Sullivan of the University of Virginia (alumn) participated as field and laboratory technicians. As previously mentioned, Prof. Gregorios N. Tsokas, Dr. Alexandros Stambolidis, and Mr. Aggelos Albanis of the A.U.T., made up consultant geophysical team, while Ms. Olivia A. Jones of Groningen University was consultant human osteologist–bioarchaeologist.

2 METHODS

2.1 DIGITAL MAPPING

The overall project and sampling areas was plotted in advance using geographic information systems (G.I.S.; ArcMap application). The Hellenic state's official Greek Geodetic Reference System 1987 (G.G.R.S.-87) coordinate–projection was employed. The project area comprises 2,134.26 hectares and consists of two adjoining grids of 30-meter sampling squares. One is that of Dr. Lane's AROURA survey, aligned with the modern field boundaries, which is enclosed by National Road E-1 (= E-75) to the west, the ancient Melas River channel on the north, the scarp of Nisi and alluvial fan of Souvli on the east, and Mt. Mytikas to the south. The other grid, joining the first to the northeast, near A.M.P., is aligned with G.G.R.S.-87 cardinal directions. It is enclosed by two arbitrary north–south lines to the west and east (avoiding land claimed by the LARCO mining company), by Mt. Profitis Ilias to the north (border with Fthiotidha Department), and by the tableland of Nisi to the south. As needed, each constituent 30-meter sampling square, originally designed for geophysical prospection and field walking, can be further divided into 225 two-meter squares, to which the basic excavation units ("test trenches") conform in plan. In this manner, particularly within the AROURA portion of the project area, previous surface collection and geophysical results can be compared with topographical precision to new excavation results.

The corner points of the test trenches in 2018 were determined in advance with ArcMap, using the sampling grids and various base maps, including the Hellenic Military Geographical Service (H.M.G.S.) 1-to-5,000-scale relief plan and Worldview-2 and Pléiades satellite data. Their G.G.R.S.-87 coordinates were then uploaded to the Javad Triumph-1 differential global navigation satellite system (D.G.N.S.S.) data recorder. The D.G.N.S.S. base station receiver was set up over the triangulation station on the summit of Glas, whose longitude (*x*), latitude (*y*), and elevation (*z*) values, measured to the nearest centimeter, had been obtained from the H.M.G.S. The roving D.G.N.S.S. receiver could thus stake out points with an accuracy of less than three centimeters within a matter of seconds when radio communication between the receivers was clear. Adjustments to the north, south, east, or west in whole units of meters were made as needed using taut horizontal tape measures when an annex to an original trench was made, The staked out southwest corner being treated as fixed. The *x, y,* and *z* values of the position of wooden stakes or steel rods marking a temporary benchmark (T.B.M.) near each test trench were also recorded to the nearest millimeter, where elevation was measured above the G.G.R.S.-87 ellipsoid height ("sea level").

In the first of the six weeks of fieldwork in 2018, after the preceding year's plant growth had been cleared from trenches AMP-T3 and AMP-T4, their corners staked out again, and T.B.M.s established, the American–Swiss crew resumed mapping the cyclopean fortification walls, interior walls, stone-lined cists, and other extant built features at A.M.P. These features were first cleared of overburden and surface vegetation with either hand tools or a gasoline-powered weed-whip. The *x, y,* and *z* values of points along these and at their intersections were recorded to the nearest millimeter in G.G.R.S.-87. The point data were added to the G.I.S. so that two-dimensional and three-dimensional maps of the features could be plotted and produced (see 3).

2.2 MAGNETOMETRY

Prof. Gregorios Tsokas' team employed a Geoscan FM-256 single fluxgate gradiometer to carry out geomagnetic prospection of two parts of the project area, on the summit of A.M.P. and in Area Q between Trench Q1-T2 (2017) and the modern course of the Melas River. Data were collected on an interval of 0.25 meter on traverses 1.0 meter wide within grid squares 20 meters on a side, set adjacent to each other to form transects. The corner points of the grid squares and transects were recorded in G.G.R.S.-87 (see 2.1) and were plotted onto the geodetic maps of the Hellenic National Cadastre (Εθνικό Κτηματολόγιο, National Cadastral and Mapping Corp.). Magnetic orientation and zeroing of the instrument (calibration) were undertaken approximately every hour during prospection. Data processing started in the field and was completed in the Exploration Geophysics Laboratory of the A.U.T.

2.3 EXCAVATION, STRATIGRAPHY, AND FINDS

Excavation was conducted according to the "single context" method developed by Museum of London Archaeology and used at several sites in the Aegean (e.g. Kenchreai and Paliambela Toumba), and stratigraphy was recorded according to the method expounded by Harris in *The Principles of Archaeological Stratigraphy* and subsequent works. In accordance with these combined methods, archaeological deposits, as perceived in the field, are removed in the reverse order in which they were laid down. Hence fills are removed and recorded before their cuts, and separately recorded, and wall courses, such as repairs and rebuilding, are also removed in reverse sequence and separately recorded. Each test trench at a site or in an area of investigation in the plain (ancient polder) was given a sequential number, which was also the first numeral of the three-digit context numbers pertaining to it (expecting there to be no more than 100 separate contexts in a trench). The context number ending in double zero (00) after the leading trench identifier digit was supposed to represent the collection of finds from the surface of the excavation unit. Excavation proceeded with small pointing trowels

most of the time, although occasionally hand picks or mattocks and mason's "triangle" tools were employed.

Artifacts and such environmental remains as shell and bone were recovered both during excavation and with a shaker-screen of half-centimeter aperture, supplemented with a 0.2-centimeter nylon mesh when recovering fragmentary human skeletal remains. They were cleaned, recorded, and stored by context number. Occasionally, intact or mostly intact finds whose place of deposition was deemed noteworthy were recorded together with a sequential "special small finds" number. Samples of building material, such as stucco and mud brick, were taken from certain contexts and recorded with a special catalogue number. Charcoal was handled and stored according to standard protocols for subsequent radiocarbon dating. Human remains were recorded both as a context and on a separate forensic analysis form. Once thoroughly air dried, all finds were stored in perforated polythene bags in polyvinyl chloride (P.V.C.) crates in the second basement storerooms of the Archaeological Museum of Thebes, marked both on the exterior and on an interior Tyvek tag with all pertinent trench, context, and description information.

2.4 SCIENTIFIC CHRONOMETRY

Two scientific chronometric programs have been implemented at A.M.P. and in the plain. The first is the regular sampling of probable organic materials, especially charcoal, from contexts identified in the test trenches for accelerator mass spectrometry (A.M.S) radiocarbon dating. Beta Analytic, Ltd., carried out the relevant analyses, and INSTAP or internal U.M.B.C. funding covers the costs. The second was funded by the N.S.F. and comprised analyses of the same deposits or constituent materials of deposits by three different methods, so as better to calibrate the dates of the features discovered in the plain to local hydrological conditions. It consists of luminescence dating (thermally and optically stimulated) of sediments and shells (as appropriate), A.M.S. radiocarbon dating of sediments, and amino acid racemization (A.A.R.) dating of shells, particularly gastropods of the genus *Lymnaea.* Prof. Nikolaos Zacharias of the Archaeometry Laboratory of University of the Peloponnese was responsible for the luminescence analyses and interpretations, Dr. Christopher Florian of the Amino Acid Geochronology Laboratory (A.A.G.L.) of the University of Colorado was responsible for the A.A.R. analyses and interpretation, and Dr. Christopher Ramsey of the Oxford Radiocarbon Accelerator Unit (O.R.A.U.) was responsible for radiocarbon analyses and interpretations.

In 2018, 10 samples were collected from AMP-T3 for A.M.S. radiocarbon dating, five from AMP-T4, and five from Area H. Some of these are duplicate "reserve" samples. Dr. Lane has applied for the export a half dozen of these for initial analysis and interpretation. He deems these to have the highest probability of rendering a date, and if granted permission, he expects results in early 2019. While the great majority of the samples submitted for carbon-14 dating have yielded a useful date, there is no guarantee (see 5.2.2).

The preliminary results of the N.S.F. funded chronometry arrived between February and June of 2018. Dr. Lane and the aforementioned consultants continue to interpret them, including applying basic statistical methods, in order to find accurate and precise correlations. Since 2017, one further radiocarbon date for AMP-T1 can be reported (see 6).

3 DIGITAL MAPPING

3.1 AGHIOS IOANNIS (FIGURE 1)

The American–Swiss team G.N.S.S. mapped all the walls and burials at A.I. that were extant or excavated in the first week of the 2018 campaign, before the Greek team resumed excavation there for the summer. These consisted mainly of extant sections of the surrounding fortification wall and traverse walls (those interior and perpendicular to the former), "Grave Circle I" in the center of the peninsula and "Grave Circle II" in the north, as well as the foundations of the modern church of St. George (formerly of St. John) for comparison with historic maps. Feature were given letter designations from A through V. The

total area embraced by the fortification wall, found on at least three sides, is about 30,000 square meters, although it is unclear still how much of this was inhabited permanently in any phase and how much was turned over to cemeteries instead (see 5.1).

3.2 AGHIA MARINA PYRGHOS (FIGURES 2 & 3)

Digital mapping of extant stone features, mainly stone wall segments and cists, resumed at A.M.P. Beginning with AE, further features were designated through BR (not including BS in trench AI-T4). Furthermore, letters E, F, and G, first used in 2016, were reassigned, the respective features being re-designated Su for "summit" (cist), I (its inner face), and Sa for "saddle" (cist). Cists are now prefixed with Im- for "immured," Sa- for "saddle," Sl- for "slope," and Su- for "summit" and suffixed with a sequential Greek letter (α, β, γ ...). Thus, between 2016 and 2018, during the first week of each excavation season, over 70 features were mapped, mostly within the inner fortification wall. Some are certainly components of a single structure and others just as certainly independent. The total area enclosed within the fortification wall now appears to be about 17,500 square meters, making it somewhat larger that the mapped extents of Iklaina in Messenia and Midea in the Argolid. Including the southern lower terrace within Wall B, the area is closer to 21,000 square meters.

4 MAGNETOMETRY (SEE APPENDIX A)

4.1 AGHIA MARINA PYRGHOS

A level area between and to the east of AMP-T1 and AMP-T4 on the summit of A.M.P., where deposits appeared to be deep, as well as a smaller area to the west of the break in slope accompanying Wall A (see below), were selected for geomagnetic prospection. These amounted to fourteen 20-meter grid squares, or a total of 5,600 square meters (Figure 4). Both transects (i.e. sets of adjoining grid squares) produced interesting results.

To the east of Wall A and parallel walls discovered in AMP-T2 and T4 (see 5.2) were several linear anomalies of both negative and positive nature (sometimes conjoined) running both parallel and perpendicular to the known walls, extending as many as 30 meters eastward until they disappear beneath the ruins of the medieval watchtower (*pyrghos*) that gives the site its name (Figure 5). These are consistent with either wall foundations (mainly negative) or robbing trenches for walls (mainly positive), that perhaps provided the material from which parts of the tower were built. In the downslope transect there is also a linear anomaly—or better a pair of negative and positive anomalies—again running parallel to Wall A. These fall almost exactly along the 160-meter elevation contour, and they seem to correspond approximately to Wall Q, mapped this year.

Also of interest are two pairs of linear anomalies in the upslope transect that meet at nearly a right angle in the northern extent and intersect the aforementioned parallel and perpendicular anomalies at an angle of almost 45 degrees. It is, as usual, unclear in the magnetometry data whether the former overlie or underlie the latter. It is conceivable that they represent an earlier or later construction. It is worth nothing, though, that the bedding planes of the local substrate limestone are aligned in approximately this direction, and so they may represent nothing artificial.

Both areas will be targeted for stratigraphic excavation in plan in future fieldwork to be carried out under a separate permit with different terms.

4.2 AREA Q

Twenty-two grid squares amounting to 8,800 square meters were sampled with magnetometry in Area Q (Figure 6). The objective here was see if it was possible to capture any anomaly that marked the continuation of the long linear one detected during Dr. Lane's prior AROURA survey in Transect A1 (and its corresponding field mark). A feature corresponding to this Dr. Lane had cored into in Area A, and the MYNEKO crew located several hundred meters to the north and excavated in 2016 (trench O2-T2; see 6.2). With sanguinity rising from prior successes, the American–Swiss crew had excavated trench Q1-T2 in 2017, with the goal of finding this feature where it

would intersect the extant retaining wall of the elevated L.H. joint channels for the Melas and Kephissos Rivers. As reported last year, MYNEKO discovered nothing corresponding to the anomaly, despite G.I.S. analysis of the field mark. The anomaly should have intersected the river channel at G.G.R.S.-87 E 0428640 N 42601716 (see Figure 6). Curiosity was unabated this year.

Nor did Prof. Tsokas' survey detect anything convincing, although it did detect several linear anomalies that appear to be unrelated to the feature. However, the trajectory of the anomaly, especially if the corresponding feature changes course slightly to the west, would run close to the western edge of the sampled area, and a high crop of clover in the field adjacent to the west prohibited sampling. It is possible that the anomaly makes a ghostly appearance on the western side of the transect (Figure 7), but the interpretation is weak. One should note, though, that the data range was clipped to ± 2.0 nanoTeslas (nT) here. The data from AROURA were clipped (and "despiked") to a range no greater than ± 0.5 nT, at which point the anomalies appeared clearly, sometimes, nonetheless, because of their long linear character. The subtlety of the responses—despite the corresponding features being substantial—was undoubtedly due to the low magnetic contrast between the ancient lakebed material from which they were create with lack of development of distinct soil horizons since drainage was completed in the last century.

5 EXCAVATION, STRATIGRAPHY, AND FINDS

5.1 AGHIOS IOANNIS [*DR. KOUNTOURI*]

As was noted in previous reports, the hill of Aghios Ioannis (Figures 8 and 9) is the middle of three peninsulas that extend from north to south at the foot of Mt. Profitis Ilias into ancient Lake Kopaïs' surface, now level arable land. The top of this rise, above the Pleistocene scarp, consists of three low natural "terraces," on each of which, in the years 2016 and 2017, test trenches brought to light evidence of M.H. and L.H. inhabitation, as well as the use of the certain areas for burials during the M.H. Age. During this year's campaign, two trenches were investigated in the southwest part of the hill on the lowest terrace (Sector 4). Trench AI-T14 was resumed from last year, with the objective of revealing Wall 402's elevation. AI-T18 was also opened, which was to the east of T3–5–7–8, the West House excavated in 2016–2017, separated from T14 by a 0.5-meter-wide balk. Further investigation revealed a storage area, evidently connected with the West House, an area which was most probably was a pithos storage room (*pitheon*). In the middle terrace of the hill, trenches T17 and T23–T25–T26 (annexes to T17) were opened to the north and east of the Grave Circle I to expose the continuation of M.H. Wall 101, which was first detected in 2017. To expose and investigate more probable graves on the middle terrace of the hill (Sector 1), trial trenches AI-T20, T21, T22, and T24 were laid out. They revealed that ostensible surface features were fortuitous formations of the local bedrock, not cist graves. Furthermore, on the highest terrace, in the northern part of the hill (Sector 2), six more graves were investigated in 2018. They were grouped in enclosed, terraced plots, and they date to the Late Roman Period, judging from copper *assarii* (*asses*) of the fourth century C.E. that were associated with them.

5.1.1 EXCAVATIONS IN SECTOR 4 (SW)

The cyclopean fortification wall of Aghios Ioannis was detectable over a total length of 560 meters. At the south end of the hill, during the campaigns of 2016 and 2017, ruins of residences and graves beneath their floors were detected. Some of the graves may have been for infants. In one place, the whole skeleton of a female equid rested in a shallow pit on the bedrock. In 2018, trench AI-T18 was opened to ascertain what relation, if any, this animal burial had with the West House (T3–5–7–8).

At the same time, the investigation of long transverse Wall 402 was continued, which had begun with AI-T14 in 2017. In 2018, after the clearance and removal of the surface layer of this trench (context **1400**), a second layer were defined (**1401)**. The latter was the topsoil, disturbed by roots and plant bulbs. It contained

miscellaneous small potsherds. Two successive arbitrary layers, contexts **1402** and **1404** were defined by the appearance of stones and whitish earth below a depth of about 0.34 meter. They comprise the lower part of the topsoil and show evidence of a destruction or abandonment phase. Context **1403** was a horizontal extension of the trench on the surface, designed to improve the investigation.

The last layer that appeared in 2018 was context **1408**, an clayey layer but not whitish, as elsewhere. The finds in the intervening layers were non-diagnostic pottery sherds, a few pieces of bones and shells, as well as an intact vase handle at a depth of 0.27 meter, in direct contact with the northern face of the wall. This year's campaign continued the stratigraphic sequence of excavation established last year (Figure 10). After cleaning the exposed surface inside the trench, layer **1406** was defined at a depth of 0.46 meter. At the same time, an accumulation of stones, noted during the last year's campaign to be adjacent to the wall, was also cleaned. The earth between the stones was brown and mixed with roots and bulbs. The depth of the stones measured on the north side of the wall are as follows. The highest stone rises to 0.34 meter, the lowest stone to 0.38 meter. Context **1407** was thus defined, observing also the surrounding whitish color and decomposed limestone. After the overburden was removed, the bedrock began to appear toward the southern end of the south side of the wall. The next layer, **1408**, was defined only for the northwestern part of the trench, including the underlying stones. Its soil matrix was brown with whitish specks; no distinctive differences were noted in relation to the overlying contexts. The finds this year were mostly coarse-ware pottery (including some burnt potsherds), and a few bones, shells, and obsidian blades. The rubble component appears to be a pavement substrate, probably to smooth out the unevenness of the bedrock, which rises toward the southern end of the trench.

Trench 18 measured 5.0 by 1.7 meters and was oriented from north to south. It was opened in order to establish the end of east–west Wall 402, which was perpendicular to the east scarp of T18 and to investigate its relationship to the West House (T3–5–7–8). The first context (**1800**) was the surface of the trench after removal of last year's overburden. It can be characterized as being soft and darkish brown. The next context (**1801**) was traced at a depth of between 0.55 and 0.64 meter, due to the slope of the hill here. The earth was white to yellowish in color and hard. While the surface was being cleaned, the uppermost courses of the wall emerged. In the south-central part of the trench, at a depth of 0.58 to 0.63 meter and at a distance of 0.10 to 0.80 meter from the east scarp and 1.40 meters from the south, a concentration of small cobbles was detected which, after the removal of the surrounding soil, was observed to continue in row from east to west. The location of the row of stones was as follows: to the east, its distance from the north scarp was 2.95 meters and from the south 2.05 meters; to the west, it was 2.76 meters from the north scarp and 1.65 meters from the south, being 0.68 of a meter deep in the east and 0.65 in the west. The row sloped slightly toward the southeast and it could be oriented along the same lines as the West House (T3-5-7-8).

In the meantime, in the southwest part of the trench, where the earth more variegated, three stones of large size were detected. They were named A (0.70 m deep), B (also 0.70 m deep) and C (0.75 m deep). A whitish compact layer of mud brick was observed. In some spots it was brown with scattered white specks. After the removal of **1801**, context **1802** through **1804** were defined, differentiated according to the position of the aforementioned stones. The removal of layer **1802** revealed a concentration of cobbles 0.10 meter from the eastern scarp, 1.50 to 1.60 meters from the northern, as well as a boulder (0.30 m long) adjacent to the east face, at a depth of 0.74 meter and 2.37 meters from the north scarp. As excavation proceeded, a large number of cobbles was revealed at a depth of 0.74 meter. The concentration covers an area of 0.65 by 0.50 meters. Its distance from the north scarp rises to 1.37 meter. During investigation of **1803**, the stones which were detected (A, B, and C) were cleaned, and more cobbles were revealed at a depth of 0.70 to 0.80 meter. They seem to constitute part of a wall oriented

from east to west (Wall 405). After this point, Wall 405 and the southeast corner were unified in a single context numbered **1806**. In context **1804**, the row of stones was removed, and it was observed that there was no deeper continuation.

Meanwhile, the shards of pottery that were detected were collected, and **1802** and **1804** were combined as context **1805**, since the texture and consistence of the soil was the same. In context **1805**, particularly in the southwest corner, at a depth of between 0.85 and 0.92 meter, a compact mass of clay (0.85 by 0.50 m) was detected. It was 0.10 meter from the north scarp and 0.72 meter from the east. At the same time, close to the southwest corner, brown silty or clayey features, arranged perpendicular to each other to form a gamma shape (Γ) came to light. They were detected at a depth of between 0.86 and 0.92 meter, and they rise to 0.40 meter in the north branch and 0.60 meter in the west one. It is possible that the three sides formed a pi shape (Π), defining an internal rectangular space. In underlying context **1806**, more small and medium-size stones were uncovered, appearing to form a small wall (Wall 405).

For the further investigation of the area and particularly of the southwest part of the T18, it was decided to extend the trench in five places which are named annexes A, B. C, D and E (Figure 11). It should be noted that E was contiguous with the West House (T3–5–7–8). Moreover, annexes A and B belong stratigraphically with context **1801**, while C and D belong with **1802**.

The focus here is on T18C (**1802**) where a partly burnt pithos was found near the northwestern quadrant. Subsequently, in the central and northern part of the trench, at a depth of 0.72 to 0.73 meters, compacted fallen mud bricks were detected. Meanwhile, after removal of the surrounding layer, two pithoi were revealed in situ, which were named A and B. The pithoi were adjacent to each other and sit at a depth of 0.49 meter (A) and 0.62 meter (B), respectively. Due to poor firing, they are not in a good state of preservation. Beneath the mud brick layer and the pithoi, at a depth of 0.81 to 0.95 meter, the earth was dark brown. This layer was context **1807**. Fragments of pithoi were also detected on the western side of T18C which were buried in situ by the collapse of the walls of the room. At a depth of 0.52 meter and at a distance of 0.41 meter from the long wall and 0.50 meter from the east scarp (**1801**), fragments of pithos A were detected, as well as a pithos of smaller dimensions, together with concentrations of reddish burnt clay at a depth of 0.78 to 0.86 meter. During the removal of layer **1805**, shards of pithoi A and B were collected. Discovered also were a stone pestle for a grindstone and a krater, at a depth of 0.85 meter and at a distance of 1.30 meters from the east and 0.85 meter from the south scarp, inside which another fragment of a pithos was found. Brown, powdery layer **1807** was encountered at a depth of between 0.70 and 0.80 meters. This layer was essentially the same as the layer **1805**, and the difference in color was due to the presence of roots. At a depth of 0.75 meter and at a distance of 1.0 meter from the east and 0.80 meter from the south scarp, a jug was recovered. At the boundary between T18 and T18C, at the point where the enigmatic gamma-shaped (or pi-shaped) construction was found, a mass of clay with impressions of organic material (probably reed) was found. With the removal of the sediment from T18 and T18C, the floor of the area was revealed. Its depth varies from 0.90 to 0.97 meters. All the vases that were detected are lying on the floor. Three of them are surrounded by red compact clay which was part of the structure upon which they sat. The floor was detected at the boundary between T18 and T18C, near the aforementioned clay feature and in front of pithos B. Altogether, the trench provided semi-coarse and coarse potsherds in all context and a large number of vases found in situ, creating the impression of a pithos storage room (*pitheon*; Figure 12).

5.1.2 EXCAVATIONS IN SECTOR 1 (CENTER)

At least six cist graves were found at the middle plateau of the hill. They are large and variously oriented, and they are placed very close one to the other. Four of them had been investigated in previous seasons. This year's investigation focused on studying the

continuation of M.H. Wall 101, which had been discovered last year at the northeastern corner of Tomb 4 (at a depth of 0.80 m).

Trench AI-T17 with its annexes to the west, east, and north) together with T23–T25–T26, form a unit (Figure 13). This joint excavation unit measures 3.10 by 2.20 meters. At a distance 0.51 to 0.59 meter from the exterior of the northern slab of Tomb 4, the face of a wall came to light (Wall 102). A stratum, whose depth varied from 0.62 meter at the center of the northern part of the trench to 0.56 at the northeastern corner, was defined as context **1703**. It sealed the face of the wall. The wall was constructed with small and medium-size cobbles. Within the trench, scattered potsherds were found packed into the soil matrix. The trench was extended in three directions, to the east, west, and north, to investigate the area further. The investigation in the northern annex aimed to find the opposite face of the wall, which runs from east to west. The northern extent of this wall was found within layer **1702**. Another small cross wall (Wall 103), running from north to south, was brought to light at a depth of 0.57 meter and divides the area into two parts. In the eastern part of the trench, compacted gray and yellow mud bricks were revealed, which most likely constituted the collapsed superstructure. In the western part of the trench, a pile of small and medium-sized fallen stones was identified. It was 0.81 meter wide at the northern end, 0.44 meter at the southern, and 1.66 meters long. At first, it was assumed that this pile represented the floor of the room. However, as soon as some of the stones were removed from their original position, it was recognized that there were more stones below, indicating that the stones were the remains of a collapsed interior wall. Several potsherds, a few animal bones and seashells, and one obsidian core were recovered.

In the western end of the trench, a large, square mud-brick block or plinth was discovered at a depth of 0.64 meter, 0.20 meter from Wall 104, and 0.34 meter from Wall 102, together with pithos fragments that were packed into the soil. To determine the character of the stone pile, which looked like one of the platforms that constitute the area of cist graves, the fallen stones were cleared away, and trial trenches were opened to uncover the structure in its full extent. It appears that this arrangement covered the entire area of the tombs. It consists of a double row of cobbles and dates to L.H. IIB period or earlier, given a miniature rhyton found sitting in a one-handled cup (Figures 14 and 15) that came to light at a depth of 0.33 meter, in contact with one of Tomb 4's stone slabs.

5.1.3 EXCAVATION IN SECTOR 2 (NORTH)

On the northernmost terrace of the eminence of A.I., six cist graves had been investigated in 2017. Three of them were enclosed within a stone enclosure and two were covered by a low circular tumulus. This year, another six graves were investigated, which were enclosed within walls of rectangular shape and were arranged on terraces (Figure 16).

The large number of tiles and *assarii* of the fourth century C.E. that were found in this area indicate its reuse as a cemetery in the Late Roman Period. The later burials are inside graves oval in plan, like the outline of a modern wooden coffin, which are constructed with cobbles and bricks. Two of them accommodated double burials. Goods were found only in one grave, where a coin and a ceramic vase were recovered. The details follow.

TOMB 7 AND TOMB 8 (T15); TRENCH 6 (S OF T13)

Trench AI-T15 was located on the steep western slope of the hill. At the center of the trench an accumulation of stones was found, which needed further investigation. Because of the sloping terrain, the upper surface of the trench rose from 0.70 meter on the western edge to 0.38 meter at the center, and up to 0.83 meter deep. At 0.08 meter below the eastern side of the trench, a stone slab one meter long came to light, which forms the eastern edge of Tomb 7. The tomb was oriented from east to west, and its northern edge could not at first be detected. Hence, the fill of the tomb was removed up to the northern edge of T15, and the pottery collected was recorded as belonging to layer **1504**.

At a depth of 0.30 meter, stones emerged that form and delineate the northern side of the tomb. The fill within the newly observed boundaries attributed to context **1505**. As excavation continued, a second row of stones came to light on each long side of the tomb. The matrix of this fill was light brown. The finds recovered include few shells and bones, as well as two obsidian cores.

At a depth of 0.41 meter, a well-preserved skull came to light. The skeleton to which it was attached was oriented from east to west, with the skull facing west. The corpse appeared at first to have been placed in a contracted position. However, after the skeleton was fully exposed, it became clear that it was lying in a supine position, with the head facing west and the hands crossed on the chest. The skeleton measures 1.45 meters from head to foot and 0.40 meter in width at the shoulders. Bedrock was found beneath the skeleton, at a depth of 0.52 meter.

Along the southern side of trench T15, at a depth of 0.40 of a meter, part of smaller Tomb 8 started to emerge, necessitating the extension of the trench to 0.80 meter northward. The surface above the tomb mostly contained spoil from previous years' archaeological operations. As the excavation progressed, more of the tomb's stones came to light. These were irregularly arranged. Therefore, it was assumed that the tomb was larger than initially estimated, oriented from northwest to southeast, probably extending beyond the southern boundary of the trench.

During the excavation of the Tomb 8, part of a skull came to light, assigned to context **1506**. This tomb has a roughly rectangular shape. Its north side consists of a stone slabs and the other three of cobbles. At a depth of 0.37 meter, the natural bedrock appeared, on which the tomb apparently rested. Apart from the skull and few shards of pottery, the tomb yielded no other artifacts. The finds collected from the western part of the slope and on the alignment of T15 were attributed to the context **1507** (Figure 17).

T16 AND TOMB 10 (T19)

Trench AI-T16, measuring 3.5 by 1.2 meters, was opened east of T13 with the aim of investigating a row of stones oriented from northeast to southwest, between the rectangular stone construction (Wall 1, T13) and Tomb 1. While removing the overburden from the trench, scattered stones of various dimensions came to light. The first stratum was highly disturbed. However, many tiles and potsherds, some of the later with combed decoration, were retrieved, in addition to a bronze coin. There were also scattered and concentrated stones in irregular arrangements, among which more bronze coins came to light, perhaps part of a small hoard.*

The cover slabs of Tomb 10 came to light at a depth of 0.35 meter, at a distance of 1.28 meters from the western edge of the line of stones found in T16 and 2.17 meters from the western edge of the trench. The tomb was oriented from east to west and measures 0.68 by 1.88 meters. The removal of the fill from the tomb began at 0.40 meter below the surface. The surface layer was defined as context 001. As the investigation progressed, it became clear that the tomb contained two skeletons. The skull located at the south end was found at a depth of 0.64 meter, the one at the north at a depth of 0.67 meter. The skeleton associated with the northern skull was in a supine position with the hands probably crossed on the chest. The remains of that to the south were disturbed, and some of the bones from the pelvic girdle were found near the legs of both the skeletons. The dimensions of both skeletons were about 1.70 meters from head to foot and 0.35 meter across the shoulders. The tomb was oval in plan, and it was constructed with rubble masonry of medium and large size stones and interspersed tiles (Figure 18).

* At the conservation laboratory it was realized that they are actually two coins: (1) a Roman *as* or *assarius,* Constantine I (Constantine the Great), minted posthumously (post-337 C.E.), obverse, bust of Constantine I with veil, facing to the right, reverse, quadriga facing to the right; (2) a commemorative *as* of Constantine I, minted in Cyzicus (330–346 C.E.), obverse, bust of Constantine facing to the right, reverse, two soldiers, on either side of a standard, SPES REI PUBLICAE.

Trench AI-T24 occupied the area north of AI-T16 and AI-T19. The surface of the trench was covered with scattered stones mixed with large fragments of tile and potsherds. Shards or pottery, a few bones and sea shells, fragments of glass, and one bronze coin were collected. Within T24, at a depth of 0.79 of a meter, three cover slabs of Tomb 9 came to light. The tomb, oriented from northeast to southwest, measured 0.70 by 1.76 meters. The removal of the fill from the tomb began at 0.56 meter below grade, and the surface stratum was designated layer 001.

At a depth of 0.66 meter, the skull of the skeleton appeared on the west side of the trench. The sedimentary matrix surrounding it was light brown and friable. Therefore, this fill was designated 002. After uncovering the whole skeleton, it became clear that it was laid in a supine position with the hands probably crossed on the chest. The skeleton was 1.50 meters from head to foot and 0.45 meter at the shoulder (Figure 19). The bedrock was located below the skeleton, at the depth of 0.84 meter.

Tomb 11 was located south of Tomb 9 at a depth of 0.79 meter below the surface. Its southern side brushes the northern edge of the stone lining in T19. Three cover slabs were revealed. The tomb, oriented from east to west, measured 1.80 by 1.02 meters. It was oval in plan and was constructed with rubble masonry comprising medium and large stones and large tile fragments. One of the latter preserved relief decoration of concentric circles.

At the depth of 0.40 meter into the grave's fill, the sediment changed and became lighter brown and friable, like chalk. This stratum was designated layer 001. As research progressed, it became clear that the tomb comprised two skeletons. The skull in the south was found inverted at a depth of 0.78 meter, the one at the north at a depth of 0.76 meter. Both skeletons are 1.55 meters from head to foot and 0.39 meter across the shoulders. They were placed close to each other oriented from east to west, with the skulls facing westward. The bedrock was found below the skeletons, at a depth of 0.82 meter (Figure 20). Taken all together, the evidence leads to the conclusion that Tomb 11, like the tombs in T24 (Tomb 9 and Tomb 12) and in T19 (Tomb 1), most likely date to the historical period, probably to the Late Roman Period, as the bronze *assarii* attest.

At the depth of 0.84 meter north of Tomb 9, the surface of Tomb 12 was revealed. Its fill was defined as layer 001. Part of a skull appeared right below the cover slab. The bones found within the tomb were few and badly decomposed. Among the finds were a bronze coin, the only one found inside a tomb, and a whole jug. Between the skull and the single preserved bone of the left hand, three potsherds were found, two with linear decoration, which probably date to the Geometric Period and introduced to the tomb through bioturbation; bones of the skeleton were notably absent in the central part of the grave. This was the only tomb so far in the Late Roman cemetery in trenches AI-T15–19–24 to contain goods (Figure 21). At a depth of 0.72 meter, in the central part of the grave, bedrock was reached. Bedrock was observed at various depths, ranging from 0.78 meter to 1.08 meters below the surface.

5.2 AGHIA MARINA PYRGHOS

5.2.1 AMP-T3 (HARRIS MATRIX, FIGURE 22)

Test trench AMP-T3 was opened in the last two weeks of the 2017 season, in order more closely to explore the relationship of the M.H. and L.H. phases on the summit's northern edge, first revealed in AMP-T1 in 2016, to the summits retaining and fortifying wall. Excavation in 2017 had only arrived at the bottom of the topsoil layers, which included evidence of post Bronze Age collapse and abandonment (contexts **300** through **305**). The first context excavated in 2018, **306**, appeared comprise the "Post-L.H. II Fill" represented by the sequence 104–118 in trench AMP-T1 (2016–17). The fill was thinner (ca. 0.4 m vs. up to 0.7 m thick) and less mixed with lenses of building material than in AMP-T1. However, this fill, similar to its equivalent in T1, comprised a matrix of pale brown silty clay loam and potsherds of date no later than the L.H. IIB–L.H. IIIA1 "pre-palatial" period (Figures 23 and 24)—whence the abbreviated moniker above. As observed

in prior annual reports, it appears to represent a deliberate capping of the summit in preparation for the first ca. L.H. IIIB buildings.

Immediately below this fill, just as in T1, were found, on the one hand, toward the west of the trench, the capstone of a cist grave (context **310**; Figure 25), and, on the other, mainly in the southeastern corner, the ruins of the lower sections of the M.H. III – L.H. I buildings in which such infant graves had been inserted (**307+309+311**). The sequence **310+313–323** defined Cist δ (Cists α–γ having been defined in 2016). The grave consisted of a sub-rectangular cut oriented lengthwise from north to south into which a stone slab "headstone" and "footstone" had been inserted at the short ends (Figure 26). These and the long sides were then sealed with a layer of white silty clay plaster. The base of the grave revealed that the cut had encountered horizontal stones over most of the length of its base (Figure 27). These may be the courses of a yet unexcavated wall foundation, such as that upon which Cist γ in trench T1 sat. Within this grave, below the capstones, were several distinct fills, alternating with concentrations of human infant bones. There are at least three individuals represented—one neonate, at least one 12-month-old, and one 18-month-old—the latter two, at least, buried with stone and glass-paste beads (see Appendix B).

Largely in the northeastern quadrant of T3, adjacent to but evidently neither cutting into or being cut by **323**, was another larger and amorphous cut, **327**. It contained two fills that were initially defined separately, **308** and **312**, but later deemed to be equivalent. Its matrix was a light brownish gray clay loam of soft consistence, tending toward brown with depth. At the eastern edge of this fill (the **312** side), were tumbled stones atop which sat some shards of undecorated pottery (respectively **325** and **324**). These appeared to overlie a brown sandy loam layer (**326**) which contained three unique specimens of pottery. One consisted of three large and joinable shards of a polychrome beaked jar (with upturned spout); its paste and slip are yellowish red, the decoration in red and dark brown bands and dark brown vertical foliate branch and possibly palmette silhouettes. The other two are a miniature amphora and miniature "hydria" (three-handled amphora), both with dark grayish brown wavy vertical foliage patterns. The former has a light brownish yellow background slip and paste, whereas those of the latter are yellowish red. The paste, decoration, and shape of all three vessels (Figure 28) have Late Cycladic (L.C.) I–II parallels, so if they are not L.C., then they may be local imitations. One problem confronting interpretation is the death of contemporary L.H. I pottery data in Boiotia (K. Sarri, pers. comm., 2018). Further analyses are warranted. The vessels will be subject to a special publication.

In the layer containing these vessels were also found infant skeletal remains, four beads, one apparently of non-local pink quartz, and a small fragment of ivory, possibly boar's tusk. It is worth noting that this corner of the T3 has evidently suffered much bioturbation, given that smaller fragments of the beaked jug were found in the lower layer of the disturbed topsoil above (**302**) and in the previous AROURA surface collection just to the north, outside the inner face of the cyclopean circuit wall (unit 2a1-1210). Hence, it is not out of the question that the vases and the skeletal remains belong to the fill of cut **327**, perhaps an area of animal or root disturbance, and represent a secondary burial of infant remains beside Cist δ.

As for the Cyclopean circuit wall, the upper extant course of it intersects the northeast corner of the T1, and probing further with a steel rod indicated that lower courses continued to at least the level of Cist δ. It would seem then that an early manifestation of the fortifying circuit wall was in place by the L.H. I. This observation is consistent with the findings of 2017, which indicated that it served also as a retaining wall for the M.H. III buildings on the summit (see 6.1).

5.2.2 AMP-T4 (HARRIS MATRIX FIGURE 29)

Test trench AMP-T4 was started in the last two weeks of the 2017 excavation season too. Its purpose was the clarify the architectural relationship between the earlier L.H. IIIB building, which seems to have burned down in the L.H. IIIB2, and the later L.H. IIIB2/C

building, which seems to have been abandoned by the L.H. IIIC Late ("L.H. IIIC building" for short). Both of them are represented in AMP-T2 by stone walls intersecting at right angles oriented to the cardinal directions, though the layout of each is different. By extension, trench AMP-T4 was meant to determine which side, if any, of these walls, was interior or exterior to the respective buildings.

In 2017, the bottom of the L.H. IIIC abandonment phase had been reached (contexts **403+404+407**). In 2018, T4 was extended two meters to the grid east, so that the dimensions of the trench become 1.5 meters north–south by 4.0 meters east–west. In addition to a separate surface collection of this extension, a series of equivalent contexts was dug down on east side of Wall A (**413–415**) to the bottom of 2017's **404**.

The L.H. IIIC building is represented by Walls A and AC in the western half of the T4. No chronodiagnostic material was recovered from the layers sealing Walls A and AC in the trench. However, a dark gray chert prismatic blade and three cortical flakes (chunks) of non-local stone were recovered from **415**, between the top of the abandonment phase and the disturbed topsoil (Figures 30 and 31). While these may have eroded to this place, the chunks are consistent with the evidence from T2 of the production of decorated and undecorated stone spindle whorls in both the L.H. IIIB and L.H. IIIC building. Unfortunately, the one sample of material from **407**, a layer sealing Wall AC, sent away for radiocarbon dating in 2017 proved inadequate for rendering a date (see 6.1).

Context **444**, a white layer of clay loam at base of Wall A, may be a deliberate mortar leveling patch on the consolidated remains of the L.H. IIIB conflagration. The top of the destruction phase is represented by context **416**, a stratum of mixed building debris, including cobbles, as though from a wall interior, mudbrick, and plaster. In trench T2, the lowest courses of Wall A had sat directly on layers of the burnt remains of the earlier building, even embedded in them, whereas parallel Wall J evidently sat on such unstable debris that it had to be pedestaled on a plinth of mud brick in a builder's cut for part of its length. Such ad hoc stabilization and leveling of the burnt remains of the L.H. IIIB building is also evident in T4. Below rubble from the post-abandonment collapse of the L.H. IIIC building was found a couple of courses of what may be a narrow wall, named "Feature BS" (contexts **450** and **451**), on which Wall A (contexts **409–410+440–443**) sits as it continues north after **444** (Figure 32). In fact, it looks, at present, as though BS may join with another stone feature continuing north, which could also have served as a foundation for A. It may be seen in stones between Wall A and Wall AC in the western half of the trench (Figure 33).

The distribution of the quantities of artifacts in the destruction contexts associated with the L.H. IIIB building appeared less even than in equivalent contexts in T2, even if considered in proportion to the size of the individual contexts. Indeed, the numbers tended to diminish below the L.H. IIIC abandonment phase. Nor did the distribution of amounts and kinds of building material—plaster and stucco, mud brick, ashes of burnt timber, and stone—provide any clues as to the collapse of one story onto another, as they did in T2. Indeed, while there was evidence of burning everywhere, there was negligible ash. The potsherd finds were concentrated mainly in layers **420** (n = 200), **431** (n = 35), and **438** (n = 73). Context **452**, a hard, pinkish gray mottled layer with flecks of charcoal embedded in its surface, which lies within three centimeters of the absolute elevation of floor **2005** in T2, is devoid of artifacts, as are the two layers above it. In contrast, **2005** and the immediately overlying **292**, of which it is a probably a continuation, yielded a total of 241 fragments of pottery, an ivory rosette, a piece of lead, and scores of bones.

Therefore, we conjecture on present evidence that the outside of the L.H. IIIB building was to the north of Feature BS (and therefore of Wall AA in T2) and is represented by surface **452**. We conjecture that the inside was south of Wall AA in T2, adducing the evidence of fallen burnt timber, sometimes in clear alignments, interior to the building, as well as the near continuous presence of pottery, lead sheets, stone spindle whorls and their manufacturing by-products, and other artifacts. This evidence contrasts with the

absence of timber ash, the lesser amount of spatially sorted building materials, and the dearth of finds (only two fragments of animal bone) on pinkish level **452**. Moreover, the concentration of finds in overlying layers, separated by concentrations of plaster, mud brick, or cobbles, could be interpreted as the result of adjacent upper-story half-timber or mud brick walls collapsing outward after weakening through the fire, followed with the slumping outward of the remains of the upper floor in episodes (see Figures 34 and 35). Context **452** is therefore currently construed as the compact stucco surface of an open-air court. Thorough comparison with the results of prior experimental archaeology of building fires will be undertaken, and relevant experimental or forensic archaeology may be undertaken too.

The question of the interior vs. exterior of the L.H. IIIC building is currently more difficult to answer plausibly. However, the concentration of artifacts to the east of Wall A in T2—most of which are of the same types found in the conjecture inside of the earlier building—in contrast to their paucity in the equivalent position in T4, suggests that the interior was also to the south. One implication of this interpretation is that Wall A, perhaps alongside Wall J, which is hardly a meter to the west, served both to enclose a roofed space (south) and an adjacent open space (north). It could be that the after the L.H. IIIB destruction, essentially the same building plan (for the same purposes) was applied, the location simply offset by some convenient measure.

5.3 THE POLDER DIKE

Two trenches were opened in Area H, on the edge to 2010's magnetometry and field walking Transect H2, which covered a section of the previously identified Mycenaean polder dike. The aim was to both the verify the multicomponent chronology of the dike and better to determine its manner of construction. We were particularly interested in the relationship between irrigation features in the Mycenaean polder, presumed to be represented by visible field marks that intersect the polder, and the dike. In other words, we were interested in detailing how water introduced to the polder was controlled and managed therein, perhaps through the dike.

The polder dike runs from the promontory of Mt. Mytikas 2.5 kilometers north-northwest toward the village of Kastro (Classical Kopai). The test trenches on the polder dike in Area H were aligned with the AROURA sampling grid, as elsewhere, to facilitate comparison of the results of the AROURA field walking's surface collection with those from excavation. Test trench H2-T1 was one meter wide and four meters long, oriented lengthwise from northwest to southeast from the eastern edge of the top of the dike toward its base to the east. It was thus laid out to explore the relationship between the dike and any intersecting or adjacent features *inside* the polder. Trench H2-T2 was one meter wide and three meters long, oriented lengthwise from the lake-ward edge of the top of the dike, where prior investigators had conjectured a retaining wall, northeastward across the level top toward the eastern edge. Thus, it was laid out to explore the relationship between the lake side of the dike and any features occupying the top.

Laying out H2-T1 required nearly a full day of brush clearing along the eastern edge of the dike. To our surprise, we discovered that a simple excavated modern irrigation ditch, between 60 and 70 centimeters deep (and full of water in that season) was hidden by the brush. It ran parallel to the dike and lay between the dike and the parallel concrete-lined double irrigation channel to the east, which is over two meters deep. The latter is part of the post-1954 Greek state development of the region and has been there since at least 1996, when the Hellenic Military Geographical Service (H.M.G.S.) 1:5,000-scale map was updated to represent it. The presence of the shallow ditch seemed to preclude discovery of an intersecting feature coming from the direction of the polder.

The stratigraphy of H2-T1 was a simple sequence of four layers, including the surface collection, context **100** (Figure 36). Context **101** was the grayish brown, sandy loam topsoil, some 10 to 20 centimeters deep, in which the bushes had sunk their roots. It yielded 24 fragments of badly eroded ceramic, which were

not diagnostic to the naked eye. Context **102** was the underlying soft, light yellowish brown clay loam that shared a distinct boundary with the topsoil. Where it came down to the modern irrigation ditch to the southeast, its color was almost white, probably from leaching as the water level in the ditch rose, permeated the sediment, and fell. Layer **102** was devoid of artifacts.

Below **102**, sharing a clear boundary, was context **103**, which had the characteristics of a subsoil B horizon, being yellowish brown clay loam, about 10 percent mottled with reddish brown, and harder than the overlying horizon. This layer was also devoid of artifacts. This bottommost layer displays a dip about 50 centimeters wide and 15 centimeters deep in both longitudinal profiles at their southeastern end, about half a meter short of the modern ditch. Since this is nowhere reflected in the horizons above, it is tempting to see this as the profile of an earlier ditch paralleling the dike, perhaps partly infilled after abandonment (Figure 37). If this is the case, then the original absolute elevation of the dike, erosion aside, was about 94.5 to 94.6 meters (G.G.R.S.-87), according to the MYNEKO survey data. According to the H.M.G.S. geodetic survey, the elevation of the plain within 200 meters to the east of the polder dike, where the lake once lay, is between 94.1 and 94.3 meters, while the early 20th-century Lake Copais Company map gives circa 94.0 meters (same ellipsoid). Hence, identifying **103** as the remains of the original dike is within the realm of hydraulic possibilities.

What remains in question, then, is what the overlying horizons represent. Trench H2-T2 provided relevant evidence. H2-T2's stratigraphy was more complex (Figure 38). Context **200** was the surface collection, while context **201** was topsoil, equivalent to **101** in H2-T1. Here, on top of the polder dike's rise, however, it was only about five centimeters thick. It gave way to a very pale brown clay loam layer **202**, which graded into another of the same color but with limestone gravel inclusions, **203**, which was only a couple of centimeters thick.

Immediately below this was a white to light gray rough clay loam layer, designated **204**, thinly coating a compact layer of limestone cobbles. At the interface between 203 and 204, embedded on the top of this evident pavement, was a fragment of a loop handle of semi-coarse yellowish red fabric and paste (Figure 39), which will be subject to future microscopic and physical analyses. The color of the layer is virtually the same as that of the underlying cobbles and could be due to diagenetic processes on the buried stone. The pavement itself consisted of two distinct parts in plan (Figure 40). The major part occupying the western 2.5 meters of the trench (**204**), appears to frame a surface continuing along the length of the dike, evident in the presence of cobbles and small boulders protruding through the surface in either direction. This was designated context **207**. In the eastern end of the trench was a perpendicular extension of the paving, about 40 centimeters wide. It was designated **208**. At first it was thought perhaps to be a buttress for a deep vertical stone structure. However, both **207** and **208** proved to be no more than 30 centimeters thick, consisting effectively of a single course of small boulders, gaps between which were packed with cobbles. Hence, the purpose of **208**, which looks quite clearly constructed, not adventitious, remains enigmatic.

In the interest of expediency, H2-T2 was half-sectioned longitudinally after the compact pavement was exposed and recorded. Immediately below **207** and **208** was a layer that resembled **203** above, a pale brown clay loam between 10 and 20 centimeters thick It was named **209**. Context **209** yielded 13 small, highly eroded potsherds that were not immediately diagnostic in any way. We assumed that **209** represented some base layer for the overlying pavement, though its light color could be due to leaching of the constituent limestone. What was curious is that the layer below this, **210** (= **205** and **206** on either side of the perpendicular "spur"), was of very dark grayish brown clay loam, some 10 to 20 centimeters thick, not correlated with any context in H2-T1. On the surface, it looks like a buried topsoil either *in situ originali* or redeposited. It contained nine of fragments of pottery, all relatively non-descript—but none of which

matched known Mycenaean fabrics and pastes. Beneath this, however, context **211** resembled **102** in H2-T1 in color and texture, while the bottommost layer, **212**, resembled **103**, comprising yellow mottles (ca. 10 percent). Contexts **209**, **210** and **211** were sampled for radiocarbon dating (see below).

In terms of stratigraphy alone, **103 = 212** could represent the earliest raising of the dike. The pavement must therefore be later. It appears to be laid on topsoil **210**, presumably redeposited, just as **102** (= **211**?) appears to be a fill too, on which **210** partly lies. Local informants have told me that the pavement represents a very old road that was in use before the modern drainage, and the Lake Copais Company's maps indicate the same. Our current working hypothesis is that the pavement represents the "Byzantine" road that the English antiquarian William Leake traced from the Vrystika Bay to the west of Kardhitsa (Akraifnio) toward Topolia (Kastro) in the early 19th century. In his own estimation, its substructure (viz. the dike) was much more ancient. We have taken samples from all subsoil horizons in both H2-T1 and H2-T2 for radiocarbon dating, and we expect results early in 2019, if an export permit is granted.

6 SCIENTIFIC CHRONOMETRY

6.1 U.M.B.C. AND INSTAP FUNDED

Dr. Lane can now report an additional A.M.S. radiocarbon date from AMP-T1, excavated in 2017. A sample of charcoal was taken from context **173**, one of the successive floor pavements into which cuts **180** and **183** were made, conjectured to reflect an effort to shore up unstable wall foundations. It therefore provides a *terminus post quem* for the cuts. The results of analysis of this sample (Beta-500260) are calibrated B.C. 1880–1688 (95.4% probability, 2 σ) and calibrated B.C. 1871–1694 (68.2% probability, 1 σ), with the highest probability within the latter (31.8%) covering the range calibrated B.C. 1776–1733 (the remainder being the two tail outliers).

With this result, MYNEKO now has fairly complete correlation of radiocarbon dates with the stratigraphy of T1. With the greatest confidence, though, by the same token, with the least precision, one can say that there is a 95.4 percent chance the time span from the floors of the earliest discovered buildings, dated from the ceramics to no later than M.H. II Final / M.H. III (context **117**), to the capping of cist grave α (context 126, Beta-470885) is no longer than 1880 to 1504 calibrated B.C. To be certain, these are the *terminus post quem* "death" dates for the charcoal's material; however, they all are derived from sealed contexts, and may reasonably be expected to be secularly related to their contexts (i.e. within the human generation of the phase of building or inhabitation).

Although the sample size is still small for thorough Bayesian methods, the figures may still be productively parsed on essentially such premises. As already noted, the one-sigma date range for the earliest floors, less the outliers, is cal. B.C. 1776–1733. Charcoal sealed by the uppermost course of Wall M (context **184**), which is not sealed by floor **173** and may have been part of the overlying conjectured "shoring up" phase, rendered dates of cal. B.C. 1742–1546 (2 σ) and cal. B.C. *1688*–1622 (1 σ; Beta-489150). Within the two-sigma range, however, there is a 79.6 percent probability that the wall course was laid down in or after the period cal. B.C. 1700–1607, excluding the shorter-duration ranges at the two tails. This span not only neatly embraces the one-sigma span, but it is also consistent with the stratigraphy and the dates from the underlying floor, whether construed narrowly (cal. B.C. 1776–1733) or broadly (95.4% probability of no later than cal. B.C. *1688;* see above).

The fills evidently laid down in the abandoned buildings in preparation for the overlying infants' cemetery had previously been provided a *terminus post quem* of M.H. III – L.H. I from diagnostic potsherds in context **149**. Context **130**, which is above this, at the base of Cist α, provided radiocarbon dates of cal. B.C. 1751–1619 (2 σ) and cal. B.C. 1737–*1643* (1 σ; Beta-470886). Within the latter range, there is a 48.7 percent probability of the range cal. B.C. 1696–1643, the remainder being a relatively short tail-end span. Thus construed, it would make the preparation for Cist α

roughly contemporary with the laying of the uppermost course of Wall M (context **184**). Noteworthy here is that this immured context is separated from Cist γ with only a single stone slab (context **165**), and that, therefore, the respective termini post quem of Cist α and Cist γ have a 45-year overlap in the one-sigma range (cal. B.C. 1688–*1643;* cf. above). Cist β is stratigraphically intermediate between the other two cists, and produced a shard of brown burnished pottery (context **139**) provisionally identified as dating to the "transitional" M.H. III – L.H. I period (cf. **149**). The uppermost fill *within* sealed Cist α (context **126**) provided radiocarbon dates of cal. BC *1643*–1504 (2 σ) and cal. B.C. 1616–1532 (1 σ; Beta-470885), there being within the latter span a 50.4 percent probability of cal. B.C. 1589–1532. Once again, even the upper range of this is entirely consistent with the termini post quem provided by context **130** and context **184** above.

Hence, the following provisional periodized absolute chronology may plausibly be advanced. By the beginning of the M.H. III (probably *mid-18th century B.C.E.*) there was a substantial permanent settlement at A.M.P. By the transition between this period and the L.H. I (probably *early to middle 17th century B.C.E.*) the structures on this, the north edge of the summit, appear to have required cuts and fills beside their wall foundations, apparently following some destabilizing event, which were then paved over. Within a generation or two of this activity (probably *late 17th to early 16th century B.C.E.*), an infant cemetery was established on the tidied ruins of these buildings. Such a chronology, with the M.H. III – L.H. I transition falling in the early to middle 17th century, is more in line with the Aegean high chronology or new middle chronology (courtesy of the University of Arizona) than it is with the traditional low chronology.

On the polder dike the calcareous lower bed of the cobblestone pavement (**209**) and the earth immediately below it (**210**) can now be bracketed with the respective dates of cal. A.D. 1300–1418 (2 σ, Beta-500261, 1 σ = 1316–1408) and cal. A.D. 1282–1396 (2 σ, Beta-500258, 1 σ = 1292–1388), which is consistent with construction during the Catalonian or Navarrese periods of the Duchy of Athens, when a Catalonian lord by the name of De Puigpardines ruled at Kardhitsa/Akraifnio (ancient Akraiphia; see 5.3). Context **211**, taken to be the topmost layer of the L.H. polder dike, rendered a radiocarbon date of cal. B.C. 1127–931 (2 σ, Beta-500259, 1 σ = 1110–1003).

6.2 N.S.F. FUNDED

Prof. Zacharias delivered the luminescence dates from profile D1-T1 and trench O2-T2 in February of 2018. The horizons dated with optically stimulated luminescence (O.S.L.) and the gastropod shells date with thermally stimulated luminescence (T.L.) showed chronological correlation with depth. The O.S.L. date of context **203** in O2-T2, independently identified in 2016 as the feature corresponding to the linear anomaly between Glas and the river channels, was 3,200 ± 220 years B.P. (1 σ), or ca. 1182 ± 220 B.C.E. That of the subsoil horizon of D1-T1, corresponding to the surface on which the Revetted Canal was built (running from Glas' eastern tip to Mt. Ftelia), was 3,600 ± 250 years B.P. (1 σ), or ca. 1582 ± 250 B.C.E.

So far, so good—except that in both D1-T1 and O2-T2, the A.M.S. radiocarbon dates from the shell component exhibit a systematic *lowering* by about 3,800 years! The ratio of carbon isotopes to one another in the shell samples, measured as $\delta^{13}C$, is *very high* with respect to both that of the radiocarbon sediment dates obtained from the similar features during AROURA and that typical of terrestrial plants (–9.20 to –7.11 versus ca. –25.00). Furthermore, the $\delta^{13}C$ ratio of the modern freshwater algae control sample, which may reflect the inverse of the mollusk shell metabolism, is *low* (–28.60) and gives a date of calibrated *C.E.* 1095 ± 25. Dr. Lane, Dr. Ramsey, and Dr. Ramsey's colleague at Oxford Dr. Peter Ditchfield are still working on determining if the offset can be calculated from the $\delta^{13}C$ data. They are sanguine that they can, since the T.L. dates, which are derived from the calcite (calcium carbonate) element of the shells, exhibit essentially the same offset within their one-sigma degree of error. *It must be noted that the O.S.L. dates quoted above are entirely independent of carbon isotope ratios.*

The A.A.R. data so far take the form of ratios of "left" (L) or "right" (D) enantiomers of glutamine and valine. As with the other results, they exhibit correlation with depth, except in D1-T1's sample 2, which may be generally contaminated. On the advice of Dr. Florian, Dr. Lane has applied for a permit to export a sample of 77 whole or nearly whole mono-generic (*Lymnaea* sp.) gastropod shells from O2-T2 context **203** (the "feature"), a smaller sample of which has already been analyzed. If analysis of the new sample corroborates the current results, then they will use to fix the A.A.R. ratios to calendar dates and thereby provide another way for calibrating the dates obtained by the complementary methods.

7 MUSEUM STUDIES

7.1 CATALOGUE

7.1.1 SUMMARY CATALOGUE OF ALL FINDS

The American–Swiss crew not only completed its summary catalogue of finds, but it also reconciled the catalogue of every year with the count finds now stored in the museum. The total finds in 16 material–manufacture classes from 2016 through 2018 numbers 13,823. Of this total, 13,442 are from A.M.P., while the rest are from the various operations on the plain (n = 377) or incidental surface finds ("X numbers") from A.I. and A.M.P. (n = 4). At A.M.P., over half of all finds (n = 7,915) were identified as potsherds. Of the trenches in the plain, 4 of 8 finds from G1-T1, 24 of 27 from H2-T1, 38 of 38 from H2-T2, and 3 of 4 X numbers were identified at pottery. The American–Swiss team has also taken 5,429 photographs of trenches, contexts, and operations, as well as 1,619 photographs of individual finds.

7.1.2 DECORATED POTTERY DESCRIPTION

An arbitrary selection of 159 potsherds from A.M.P., along with the 4 from trench G1-T1, was made for specialist study. The criteria for selection were diagnostic decorative motifs, shapes (as represented by elements), surface treatments (slip, burnishing), and fabrics and pastes. An effort was made to sample from all identified settlement phases identified in the trenches. Each of these was described according to 48 characteristics, which range from vessel part represented, dimensions, Munsell colors, hardness, fabric, eight major past inclusions, method of manufacture, to decorative pattern (Furumark Shape and Motif, if Mycenaean). All this information was entered into a Microsoft Access database using a purpose-built data entry form. Hence, not only can it be searched using Boolean operators, but it can also be exported in various open-access file formats.

7.2 CONSERVATION

The finds from all years were put in new P.V.C. bags, which were marked anew and had new, complete Tyvek labels inserted in them. The bags were then arranged in series in new P.V.C. crates, each of which had a laminated labeled attached to it with plastic zip-ties. All the finds from the previous AROURA survey were likewise re-bagged, re-labeled, and re-crated, and had their packets of silica gel replaced, inserted first in 2014 to help desiccated finds that had been air-dried in the damp autumns of 2011 and 2012.

7.3 BIOARCHAEOLOGY (SEE APPENDIX B)

Oliva A. Jones, a.b.d. Ph.D. student at Groningen University came on July 4th, 2018, to the Archaeological Museum of Thebes to carry out a preliminary examination of the infant remains discovered in 2016 and 2018. She was assisted by Eleni Panagiotopoulou also of Groningen and Irene Nolan of U.M.B.C. She concluded, as the investigators had in 2016, that Cist α (context **129**) contained a minimum of two individuals. She determined that one was a neonate and another between 6 and 12 months of age. Cist γ context **140**) contained one neonate. Of the bones in Cist δ, excavated this year, context **314** contained at least two individuals, one a neonate and another about 12 months of age. The later could be (or not) the as the individual represented in context **319**, whose age was estimated as between 6 and 18 months. Context **320**, at the bottom of Cist δ, contained one individual, and infant one year or two years old. It thus appears the cist held multiple burials, laid in at least two levels.

7.4 ORGANIC RESIDUE ANALYSIS

Vernon H. Stafford, Ph.D. candidate in Chemistry at the University of Tennessee, visited on July 4th too. He has been undertaking research into organic residues in archaeological contexts, seeking permission from site directors and eventually the C.A.C. to study materials collected at Mitrou in Fthiotidha, A.M.P., and other sides in the wider region. Dr. Lane gave him unofficial permission to study shards of undecorated ceramic storage vessels from AMP-T1, T2, T3, and T4, as well as four fragments of uncertain provenience from A.M.P. He has applied for a permit to scrape or snip parts from these for export, so that he can analyze them at his home institution. Dr. Lane also arranged for him to receive samples of honey from an apiary near the village of Neo Kokkino and olive oil and wine from orchards and vineyards in Kastro, both villages within five kilometers of A.M.P. He will use these as comparanda and control samples.

8 CONCLUSIONS AND FURTHER PLANS

8.1 CONCLUSIONS

Again this year, the authors have shown that both A.I. and A.M.P. have substantial settlements and attendant cemeteries during the latter half of the Middle Helladic Period, several centuries earlier than the date conventionally given to either the fortification at Glas or to the enormous drainage works that extend as far west as Orkhomenos on the opposite shore of the Kopaic Lake, Dr. Kountouri's abiding interest, and which helped to create the polders, one of which was a focus of Dr. Lane's research. Their discoveries corroborate the scientific dating evidence within the polder, obtained during both the MYNEKO and prior AROURA programs, that indicates that the polder around Glas was drained and irrigated as early as the first few decades of the 17th century B.C.E., the M.H.–L.H. transition, in terms of the provisional A.M.P. chronology (6.1).

Although macrobotanical discoveries are still scant, and Dr. Kountouri is awaiting the results of Dr. Margariti's sample flotation, both A.I. and A.M.P. offer hope for the discovery of the kinds of evidence that can answer the research questions outlined in the introduction to this report, especially as concern the changing socio-economic relationship between Glas, the field system in the polder, and the littoral sites. A.I. has provided evidence of a *pitheon* for the storage of liquid foodstuffs, while A.M.P. exhibits evidence of the deliberate leveling and construction at about the time Glas is fortified, the L.H. IIIB phase, followed by storage of liquid commodities and of the manufacture of bronze and ground-stone objects. Already, the American–Swiss team has answered questions that remained after the AROURA survey about the nature, character, and age of the features discovered in the plain. Radiocarbon dates from the substructure of previously identified polder dike, clearly a crucial element of the intensification of the Late Helladic flood control system, may be forthcoming, giving specific insight into its construction history and the function of functions it performed.

The results of other analyses are expected or hoped for in the late autumn of 2018 and winter of 2019. These include Dr. Daniel Fallu's micromorphological analyses and interpretations of samples he took in 2017 and 2018 at A.M.P. and in the polder. Mr. Vernon Stafford may also have the results of his organic residue analyses from the materials at A.M.P., offering clues concerning what manner of foodstuffs could have been store there.

8.2 PLANS FOR 2019

The authors' immediate plans are to finish a short article for *Antiquity* on the implications of their separate and joint discoveries on the theories of the emergence of social complexity in central mainland Greece during the Bronze Age. Dr. Lane will return to Greece briefly in January of 2019 to export further samples for analysis, if he has been issued permits, and to finish scanning A.M.P. with an unmanned aerial vehicle so as to create a geo-referenced three-dimensional model of the site and immediate environs. He will take photographs and describe the skeletal remains

from contexts **140** and **314**, adding these to his application for permission to export certain bones to Max Planck Institute in Berlin for ancient D.N.A. analysis.

He will return again in the summer of 2019 for up to two weeks, to complete any outstanding studies of the finds his crew collected during MYNEKO, including assisting Ms. (soon to be Dr.) Olivia Jones in her further detailed examination of human remains. His work will be funded by U.M.B.C. Dr. Kountouri will conduct similar studies concurrently.

8.3 FUTURE PLANS

Dr. Kountouri has received a permit to carry out new excavation at Glas, and already has conducted a preliminary survey. Dr. Lane is applying for one of the American School of Classical Studies permits to resume excavations at A.M.P. beginning in 2020.

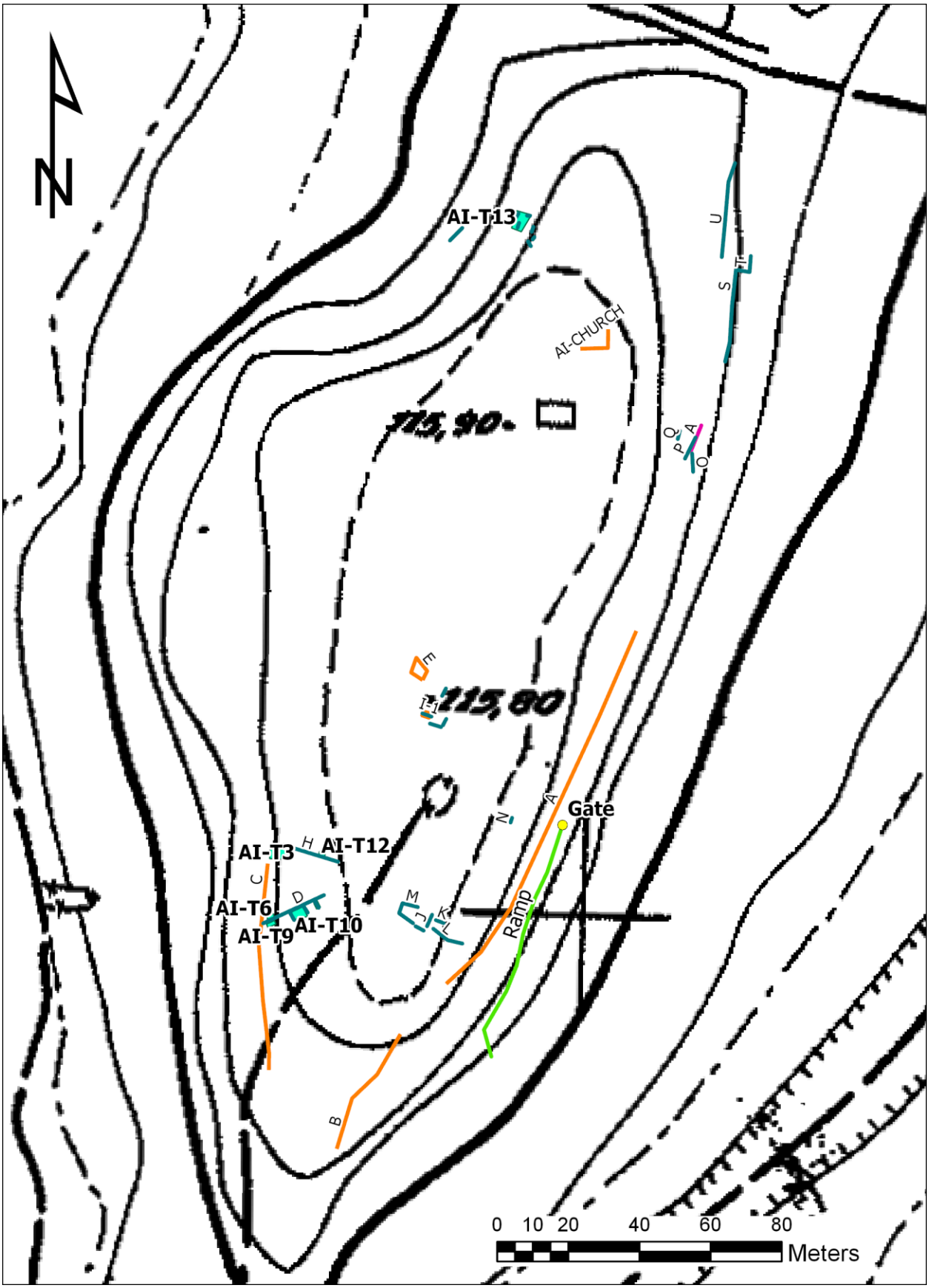

Fig. 1. Map of test trenches and extant or uncovered features at Aghios Ioannis as of June 2018 (cf. Fig. 9) (R.D. Thompson).

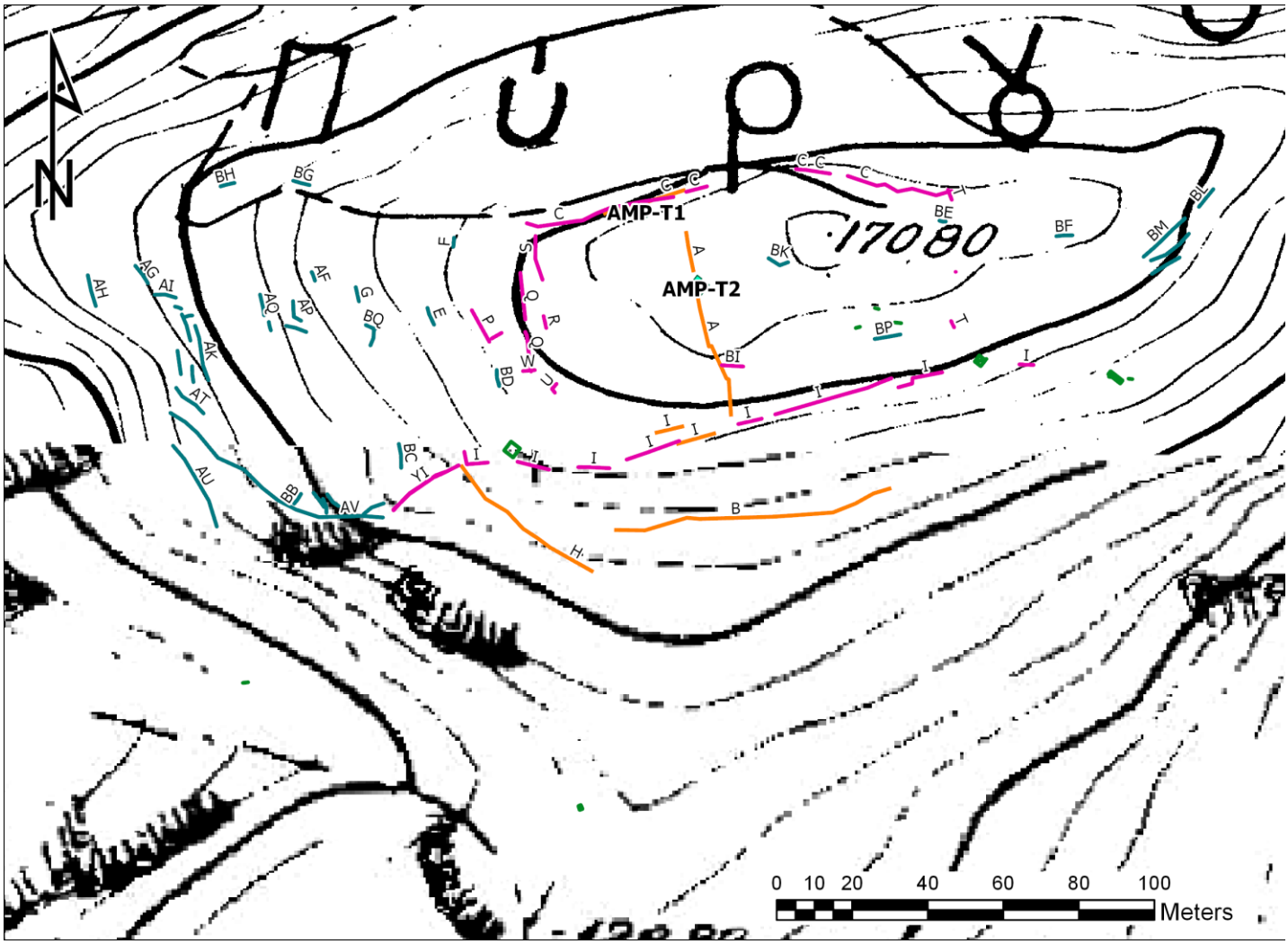

Fig. 2. Map of test trenches and extant features at Aghia Marina Pyrghos as of June 2018 (R.D. Thompson).

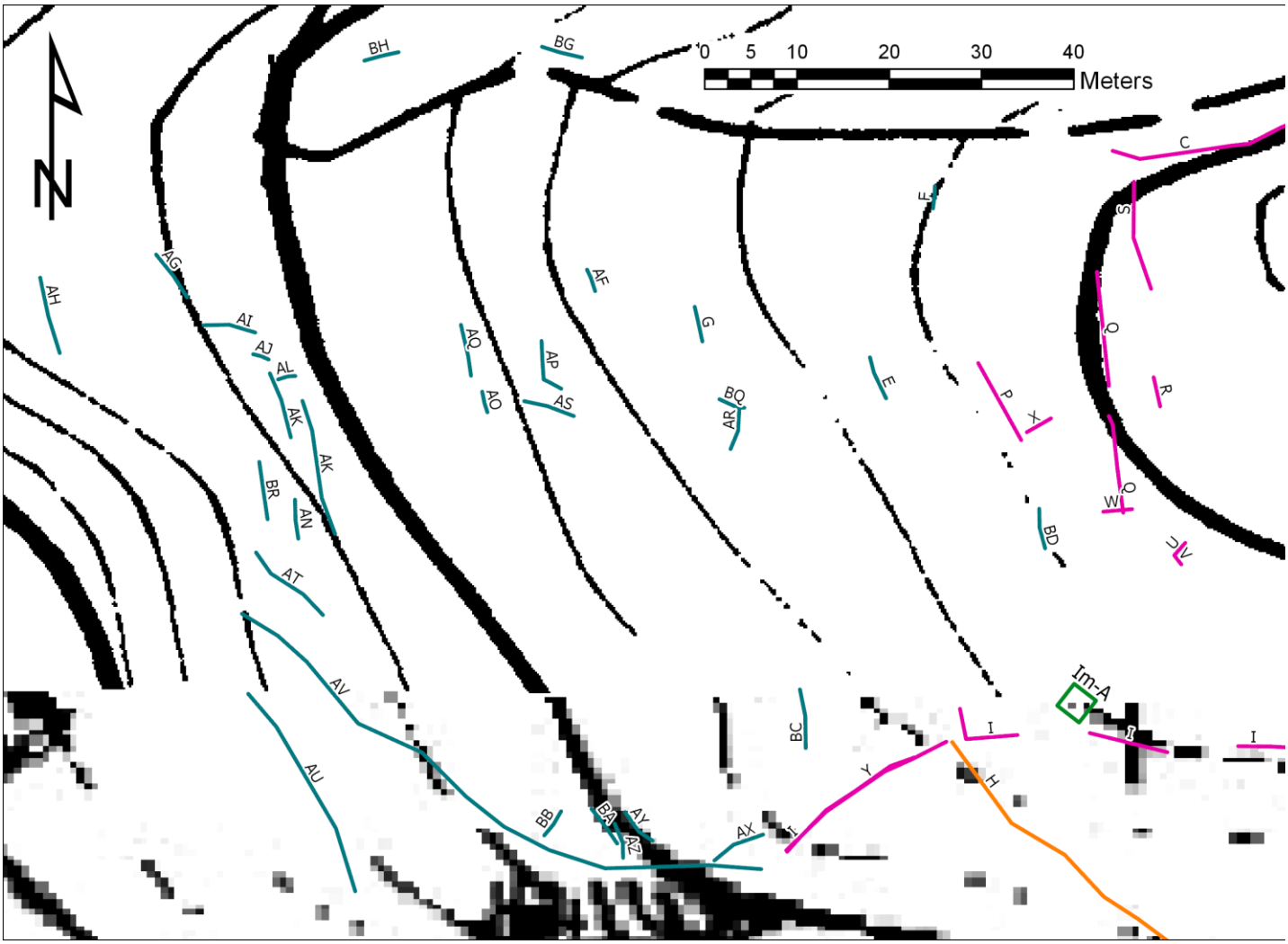

Fig. 3. Detail of Fig. 2, showing the concentration of features in the western part of the summit (R.D. Thompson).

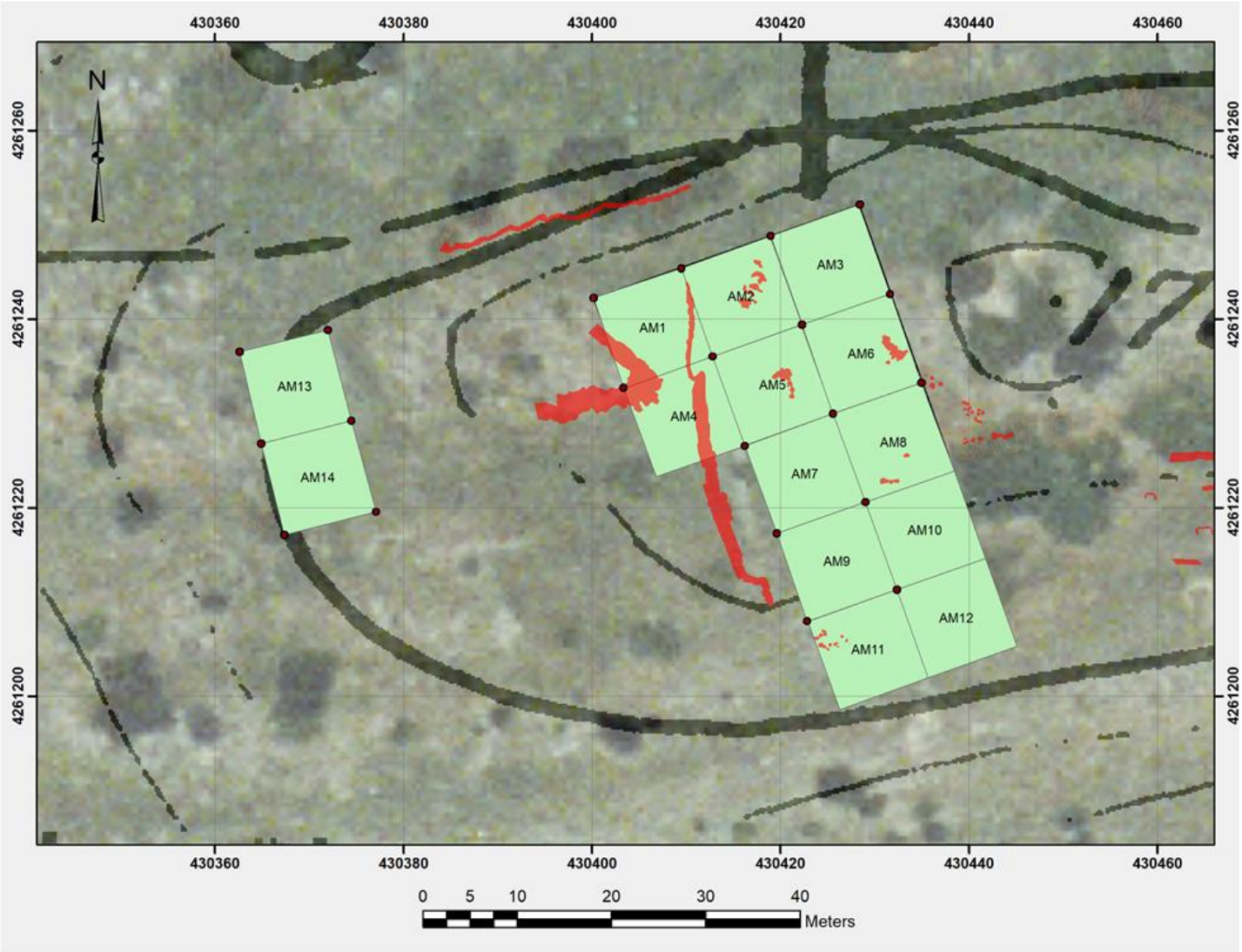

Fig. 4. Magnetometry grid on the summit of Aghia Marina Pyrghos (G. Tsokas). Red represents walls mapped during on the AROURA survey (2011–2012).

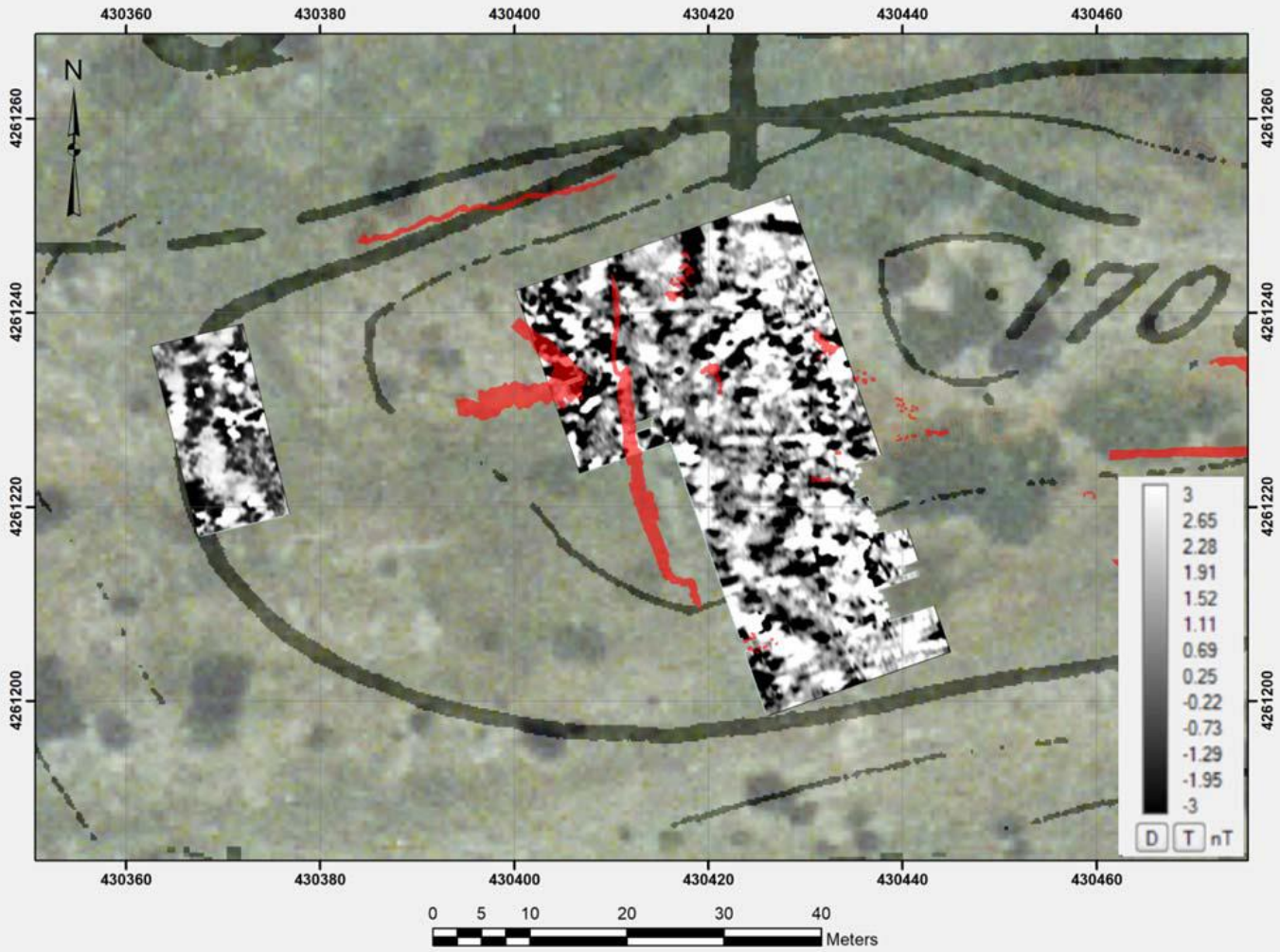

Fig. 5. Aghia Marina Pyrghos summit's magnetometry results, grayscale plot (G. Tsokas).

Fig. 6. Magnetometry grid in Area Q (G. Tsokas).

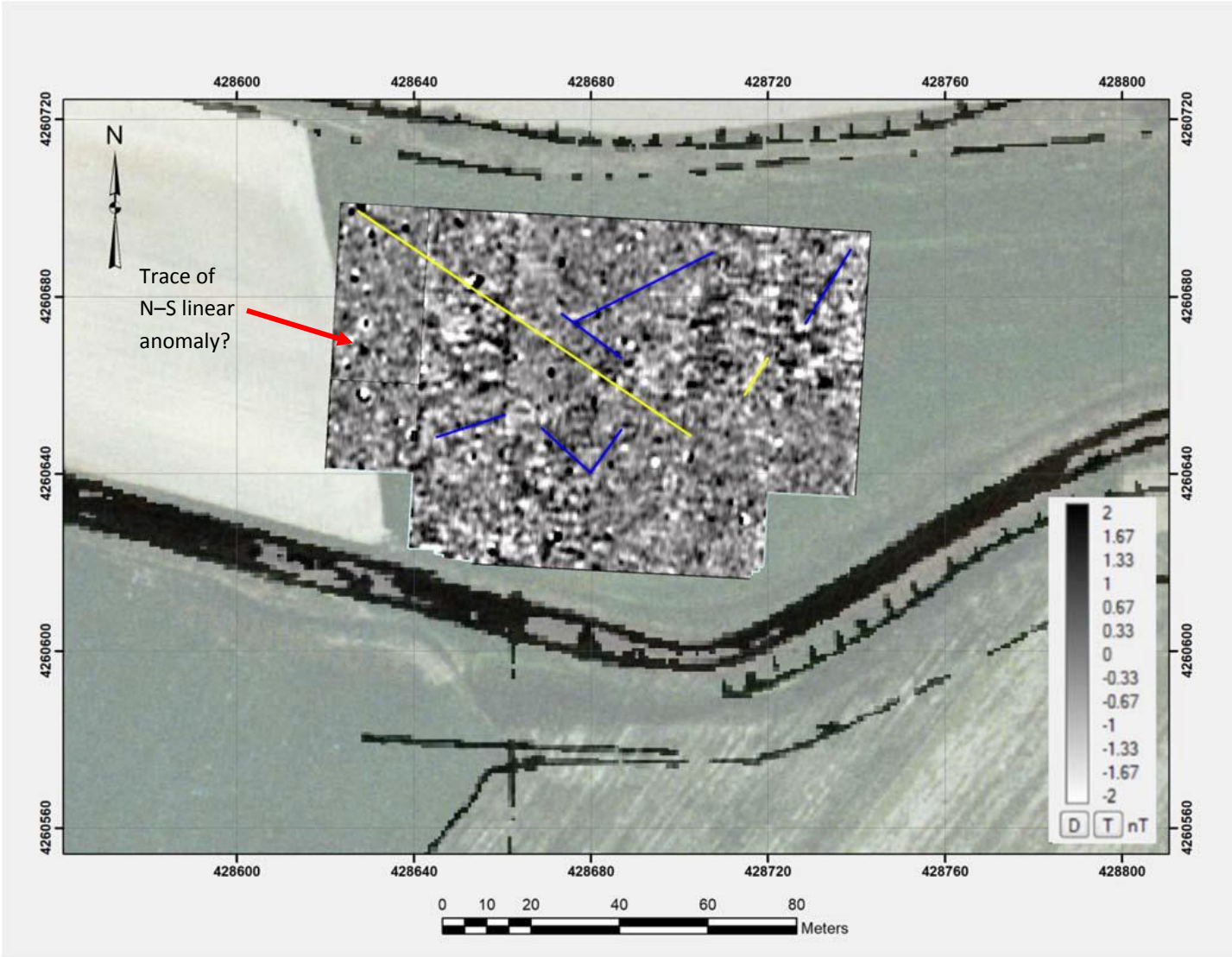

Fig. 7. Area Q's magnetometry results, grayscale plot and interpretation (G. Tsokas, M.F. Lane).

Fig. 8. Aerial photograph of Aghios Ioannis peninsula, looking south-southwest. The eponymous chapel is central.

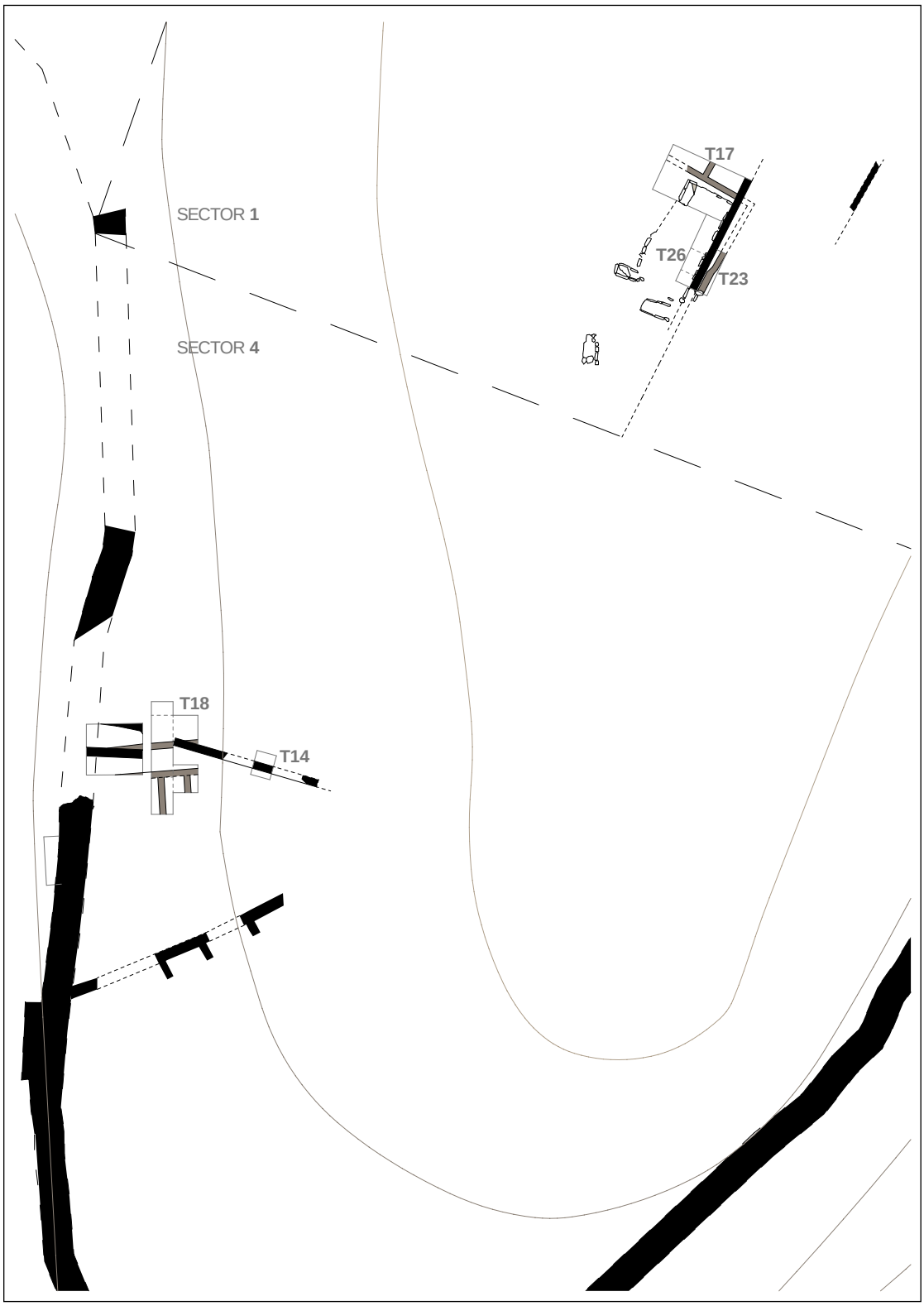

Fig. 9. Topographic plan of Aghios Ioannis Sectors 1 and 4, with M.H. walls in gray and L.H. walls in black (Th. Hadjitheodorou)

Fig. 10. Vertical aerial photograph of Sector 4. North is toward the top of the image. No scale provided.

Fig. 11. West House (right) and AI-T18 with its annexes (left). North is toward the bottom of the photograph.

Fig. 12. Perspective of the *pitheon* in AI-T18.

Fig. 13. Perspective of AI-T17 and its annexes. North is toward the right of the photograph.

Fig. 14. Miniature conical rhyton sitting inside a one-handled cup in AI-T17.

Fig. 15. Miniature rhyton from AI-T17 after conservation.

Fig. 16. A.I. "Grave Circle II," including M.H. burials (left) and Late Roman burials (right). North is to the right of the photograph.

Fig. 17. Trench 15, containing graves 7 and 8. North is to the right of the photograph.

Fig. 18. AI-T19 containing grave 16 (center). North is to the right of the photograph.

Fig. 19. AI-T24 containing graves 9, 11, and 12. North is the right of the photograph.

Fig. 20. Perspective of grave 11. Arrow indicates true north.

Fig. 21. Tomb 12. Arrow points northward.

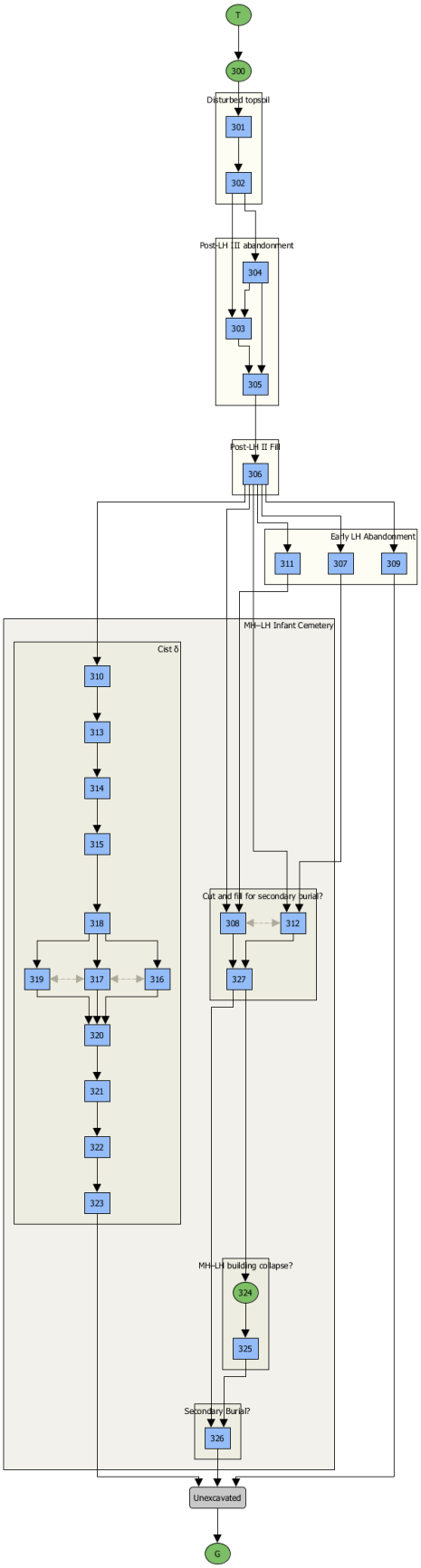

Fig. 22. Harris Matrix of the Stratification in AMP-T3 (M.F. Lane).

Fig. 23. Mycenaean potsherd from AMP-T3, context 306 (post-LH II fill) (A.B. Gibson).

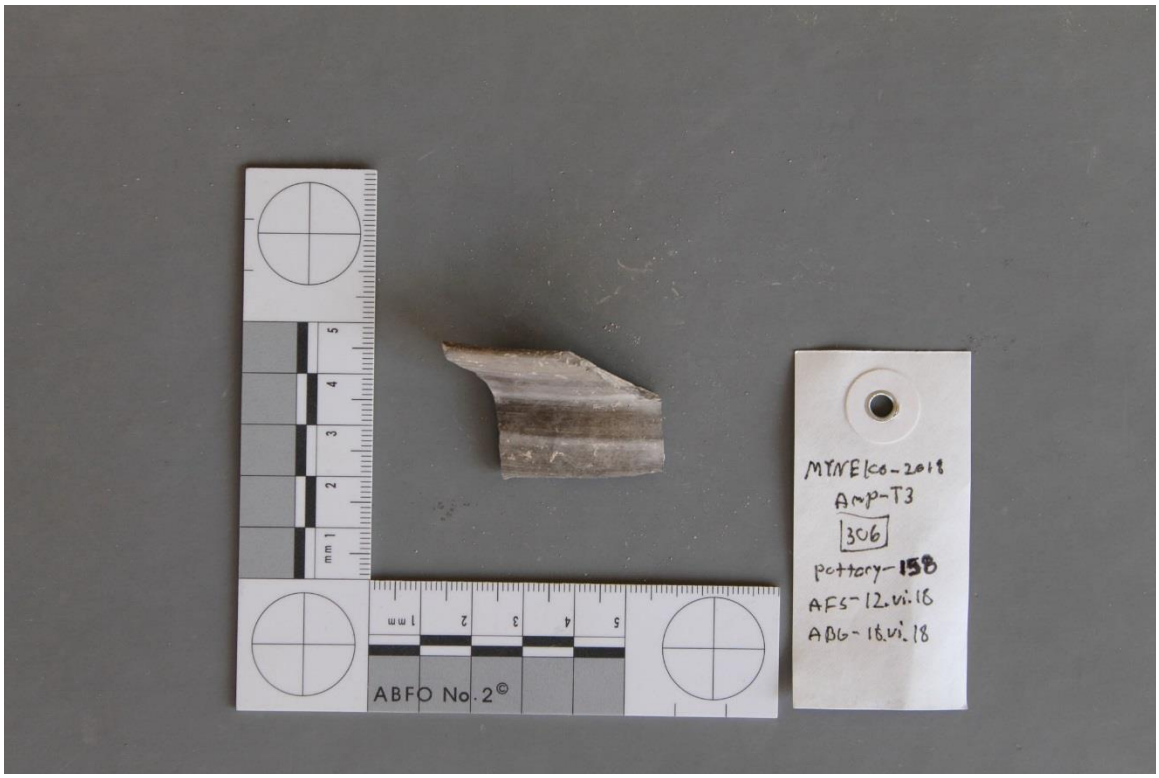

Fig. 24. Fine gray burnished potsherd from AMP-T3, context 306 (post-LH II fill) (A.B. Gibson).

Fig. 25. Capstones and “headstone” (to southwest) of Cist δ (center) (L. Phialon).

Fig. 26. AMP-T3, Cist δ showing headstone and footstone after removal of white plaster lining (M.F. Lane).

Fig. 27. Perspective of AMP-T3, Cist δ, with stone features at base of the grave clearly visible (M.F. Lane).

Fig. 28. Three vessels, two intact, from AMP-T3, context 326 (M.F. Lane).

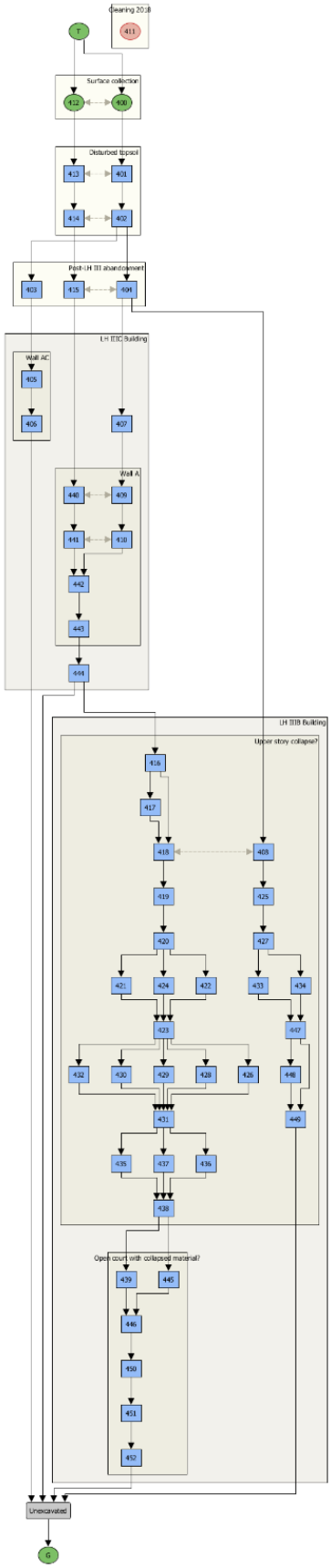

Fig. 29. Harris Matrix of the Stratification in AMP-T4 (M.F. Lane).

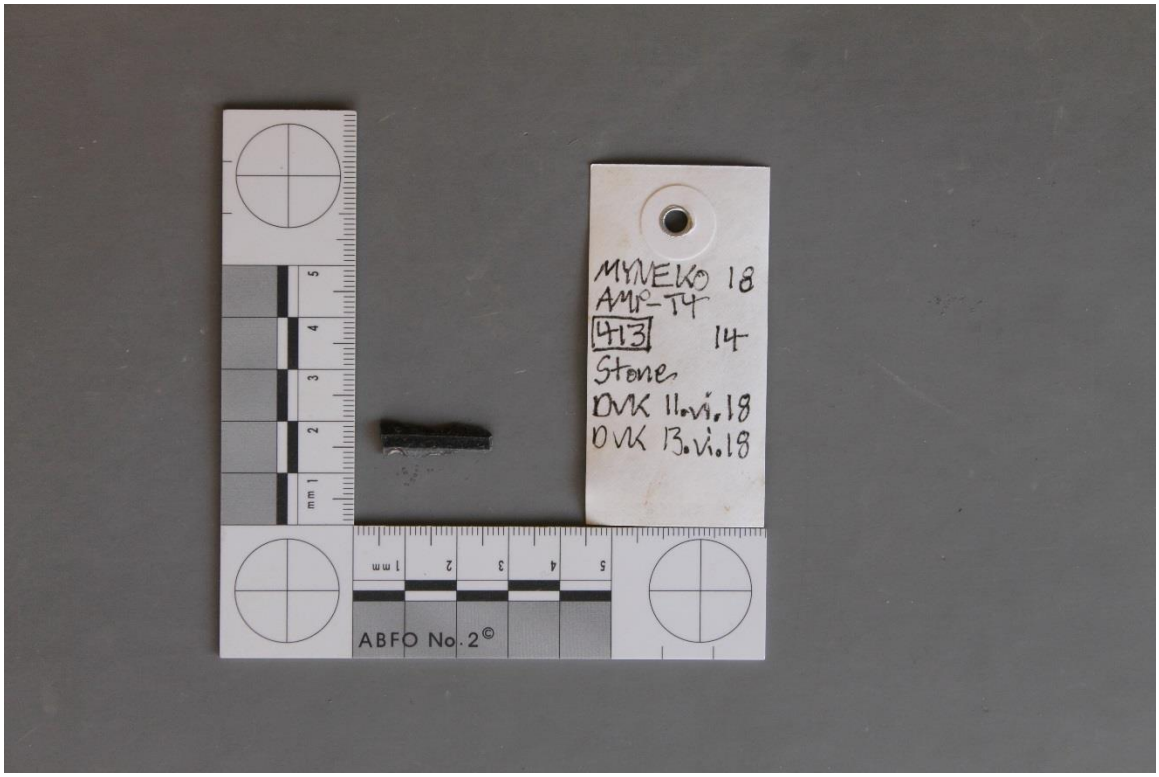

Fig. 30. Dark gray chert blade from AMP-T4, context 413 in the L.H. IIIC abandonment phase (A.B. Gibson).

Fig. 31. Chunks of various non-local stones from AMP-T4, context 415 (L.H. IIIC abandonment) (A.B. Gibson).

Fig. 32. AMP-T4, Feature BS and possible underlying wall courses (bottom, center), belonging to the L.H. IIIB phase, running under Wall A of the "L.H. IIIC Building" (above). The trowel points north, the direction of the change in bearing if these courses.

Fig. 33. Stones running underneath Wall A (center) and Wall AC (left), both belonging to the "L.H. IIIC Building").

Fig. 34. Rim shard of kylix (L.H. IIIA2/B1?) from AMP-T4, context 418, possible collapsed upper story of L.H. IIIB Building (A.B. Gibson).

Fig. 35. Black steatite spindle whorl from AMP-T4, context 443, possible collapsed upper story of L.H. IIIB Building (A.B. Gibson).

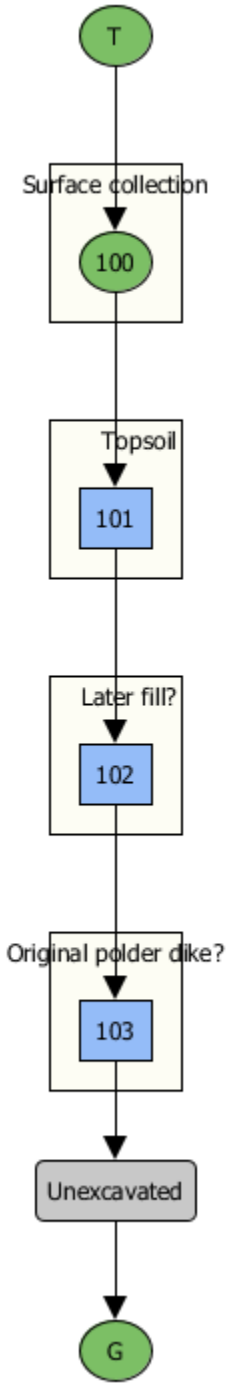

Fig. 36. Harris Matrix of Stratification in H2-T1.

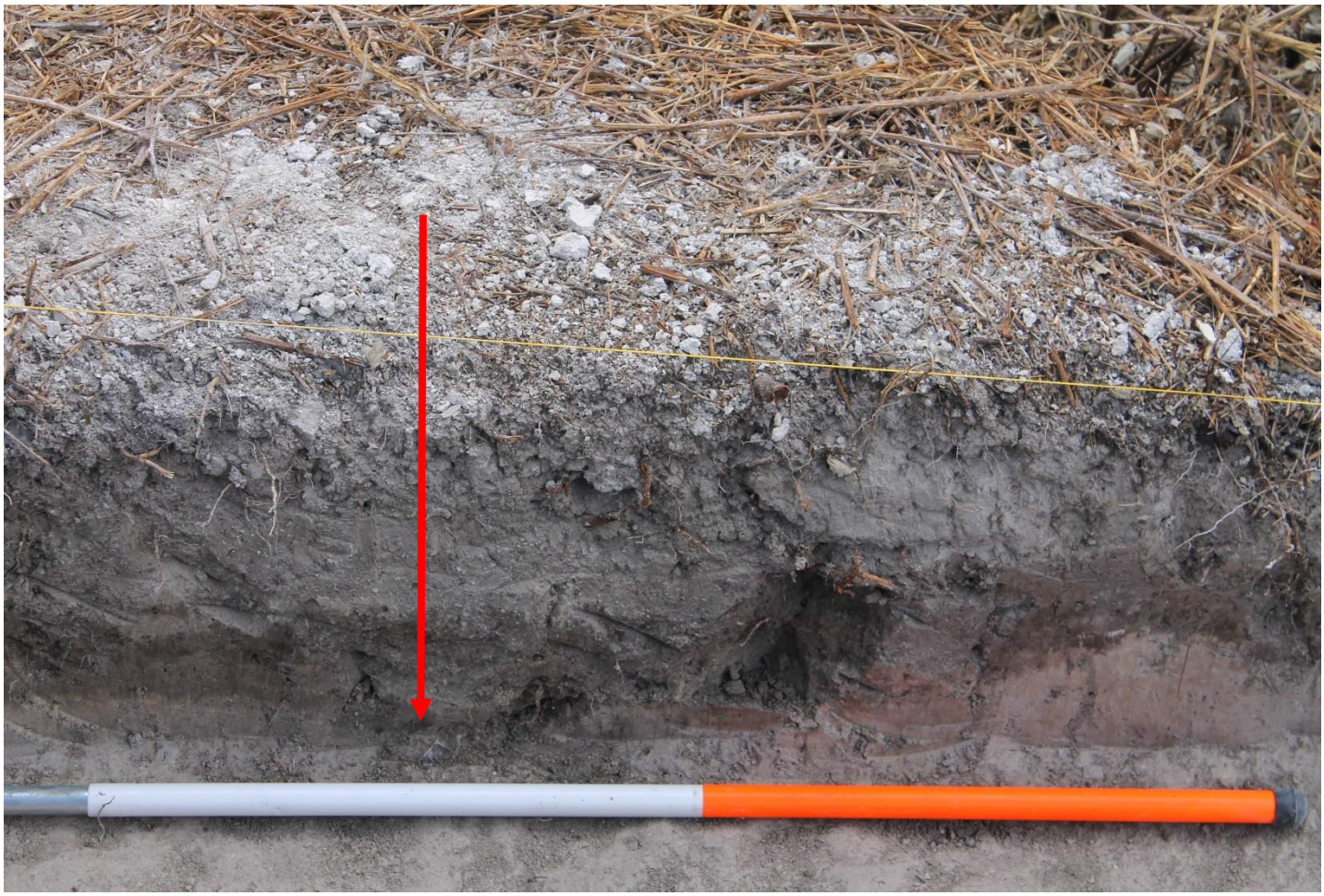

Fig. 37. Possible ditch profile in H2-T1 where the boundary between contexts 102 and 103 dips.

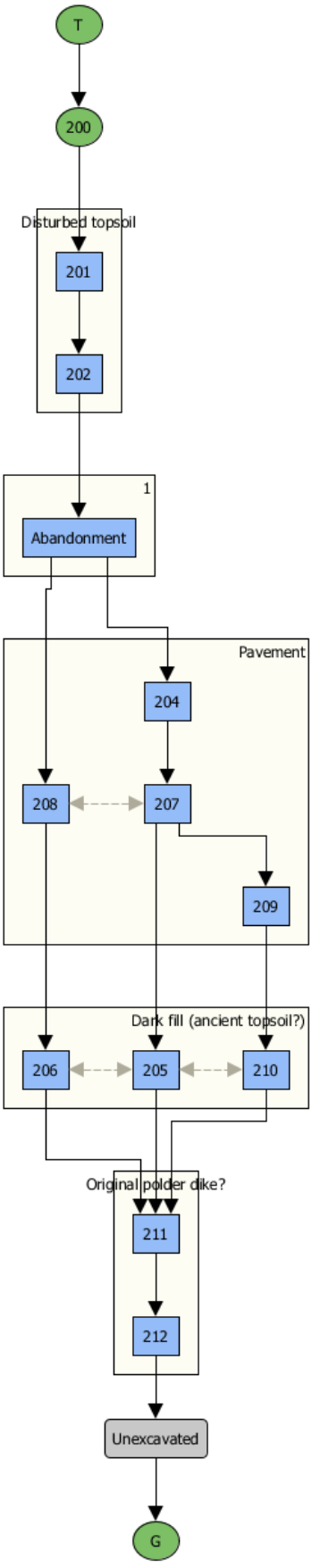

Fig. 38. Harris Matrix of Stratification in H2-T2.

Fig. 39. Yellowish red semi-coarse loop handle shard in situ in H2-T2 on top of pavement context 204.

Fig. 40. Pavement in H2-T2, contexts 204 (bottom and center) and "spur" 207 (top).T