Excavations at Kavousi, Crete, in 1900
Author(s): Harriet A. Boyd
Source: American Journal of Archaeology, Vol. 5, No. 2 (Apr. - Jun., 1901), pp. 125-157
Published by: Archaeological Institute of America
Stable URL: http://www.jstor.org/stable/496766
Accessed: 31/12/2014 15:12

Your use of the JSTOR archive indicates your acceptance of the Terms \& Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.


Archaeological Institute of America is collaborating with JSTOR to digitize, preserve and extend access to American Journal of Archaeology.

Kmerican $\mathfrak{Z c h o o l}$
of $\mathbb{C l}$ lassical $\operatorname{stu}$ oies
at $\mathfrak{A t h e n s}$

## EXCAVATIONS AT KAVOUSI, CRETE, IN 1900

## [Plates I-V]

With the appointment of Prince George as Prince High
 a new era in Cretan archaeology began. Before that time regular excavations could not be made because of the turbulence of the island; foreign archaeologists, although convinced that a rich harvest awaited them, were not permitted to put their convictions to a satisfactory test; the Turks and Ottoman Cretans did not care to make researches which would reflect glory on a Greek past; the native Christians were unwilling to dig up treasure that might be carried off to Constantinople: for these reasons, Crete remained virgin soil. Hardly had the Prince landed in Canea in December, 1899, when English, French, and Italian scholars applied for sites on which they might excavate.

Our own School at Athens was prevented from taking up a claim by the fact that our funds were wholly devoted to the excavations at Corinth. Feeling sure - in view, in part, of the encouragement given to Professor Halbherr's memorable work in 1893-94 on behalf of the Institute, - that the step would be approved, I determined to go over to Crete in the spring of 1900 , to see what could be done with a small sum of money that remained to me from the Agnes Hoppin Memorial Fellowship of which I was then the fortunate incumbent.

This idea was beginning to take shape in my mind when Mr. D. J. Hogarth, Director of the British School, and Mr. A. J. Evans of Oxford came to Athens on their way to begin the season's work at Cnossus. I cannot sufficiently express my gratitude for the serious consideration which these experienced
scholars gave to my immature project. By mentioning sites both promising and practicable, they at once put me in the way of doing a useful piece of work.

On the twelfth of April, our party consisting of Miss Patten of Boston and myself, our servant, Aristides Pappadias, and his mother landed at Herakleion. Although Miss Patten's interest lies in botany and not in archaeology, her part in the expedition was an important one by reason of her tact and good judgment and her keen powers of observation, which had been trained to great efficiency by four years of botanical research in the Polytechnicum at Dresden.

The moment of our arrival in Crete was propitious, for Mr. Evans's success at Cnossus had put every one in good spirits. We were fortunate in visiting the Palace of Minos on the day when "the oldest throne in Europe" was brought to light, and in seeing the tablets, which, "when deciphered will serve to make the Mycenaean Age not prehistoric but historic." But we were not bewildered by the magnificent results attained by Mr. Evans. Our attention had been called to the humbler period that followed the Golden Age of Crete, and I felt sure that our chance of finding a task suited to our means and our powers lay in investigating some Geometric site.

Cretan Geometric pottery had already attracted notice. In the Athenische Mittheilungen, vol. XXII (1897), pp. 233-258, Wide found his chief examples for the "Nachleben Mykenischer Ornamente" in Cretan vases belonging to the museums at Herakleion and Athens. Orsi in the American Journal of Archaeology, Second Series, I (1897), pp. 251-265, discusses Geometric vases at Herakleion. Finally in the Jahrbuch for 1899, ${ }^{1}$ Wide, taking up again the subject of Geometric pottery, draws most of his material from the islands, and, in connection with Crete, states his opinion that there the strong survival of Mycenaean influence prevented a full development of the Dipylon style (l.c. p. 35). In the present paper this opinion is called into question.
${ }^{1}$ S. Wide, 'Geometrische Vasen aus Griechenland,' Jahrb. des k. d. Arch. Inst. XIV (1899), pp. 26-43 and 78-86.

In addition to the material used by these writers, the museum at Herakleion possesses a collection of eighty or more Geometric vases marked "Kavousi," which came from a tholos-tomb, accidentally discovered in 1895 by a peasant, Theodosios Mitsakis, who showed it to Mr. Evans, when the latter was travelling through Eastern Crete in 1899. He, in turn, reported the discovery to the government, and under its supervision the contents of the tomb were removed to Herakleion where they await publication at Mr. Evans's hands.

Acting on the advice of British scholars, I made Kavousi the eastern limit of a ten days' prospecting trip through Central Crete, in the course of which we visited Gortyna, - where we were hospitably entertained by Professor Halbherr, - Anoja Messaritica, Ligortino, ${ }^{1}$ Rotasi (Homeric Rhytion), Viannos, Mt. Keraton, Vasiliki, Arvi, Hierapetra, and Episcopi. At more than one of these places I might have been tempted to put in the spade had it not been for the salutary laws which forbid unauthorized digging, and for a wish on my own part to defer judgment until we had seen Kavousi. Here the evidence presented by walls, potsherds, and small antiquities found by the peasants, when considered in connection with the tomb discovered five years earlier, seemed to preclude the possibility of failure. We hurried back to Herakleion by way of Kritsa, Neapolis, and Chersonnesos, making the journey of sixty miles in a day and a half (fast travelling for mules), and with the least possible delay sent our petition to the Minister of Education for permission to dig in the neighborhood of Kavousi and Episcopi. On May 10, I received the official document permitting me "as representative of the American School of Archaeology at Athens to excavate in the name of the Cretan government," and three days later we were established in Kavousi ready to begin work on Monday, May 14. The

[^0]campaign lasted little over a month, with a force varying from ten to forty-eight men, the usual number being between eighteen and twenty-six.

Kavousi (Fig. 1) stands ${ }^{1}$ near the northern end of the low, narrow isthmus that connects Sitia with the rest of Crete, "a day's ride east of Psychro," and four hours from Goulas. The village belongs to the eparchy of Hierapetra, and is the home


Figure 1. - Kavousi Plain and Village: from the Citadel.
of about two hundred families, whose tiny white houses cluster upon a mass of rock at the foot of a steep mountain range which, rising above the isthmus on the east, extends like a huge wall from sea to sea. This range, at a height of about 700 m ., supports in terrace fashion a mountain plain called
${ }^{1}$ Kavousi lies midway between two points whose bearings are given by Raulin, Description Physique de l'Île de Crete, I, p. 326. These points are the island of Psyra, long. $23^{\circ} 32^{\prime} 40^{\prime \prime}$, lat. $35^{\circ} 12^{\prime} 30^{\prime \prime}$, and Mt. Aphendi-Kavousi, long. $23^{\circ} 33^{\prime} 35^{\prime \prime}$, lat. $35^{\circ} 5^{\prime} 20^{\prime \prime}$.

Monasteraki, ${ }^{1}$ where many peasants of Kavousi, Epano Chorio, and the neighboring districts live during the summer, escaping the heat of the lowlands, and cultivating their vines with success. From the plateau as a base rises Mt. AphendiKavousi, ${ }^{2}$ the highest peak of Sitia ( 1472 m .), invisible from Kavousi, though easily reached in a morning's walk. Three mountains of lesser height, Kleros, Azelakias, and Kapsas, stand to the east and northeast of the village. Kapsas has its roots in the sea, and around its northern side winds the road to Sitia.

In sharp contrast to these bare volcanic mountains lies the fertile plain of Kavousi, extending northward from the village two miles to the sea. It is about one and a half miles wide, separated from the Gulf of Mirabello on the west by a low chain of hills, ${ }^{3}$ which one must cross in order to reach Kavousi's nearest harbor, "Deepsand". (Пaұєía "А $\mu \mu o s$ ), at the southest corner of the gulf. The plain is laid out in olive groves and fields of wheat and barley.

In this little corner of Crete, sea, plain, and mountains meet in the perfect combination for which Greek lands are famous. But beauty alone would not have attracted settlers to the spot

[^1]for three thousand years. The place has received another gift from nature, - an excellent strategical position commanding four important roads: the first leads west to Herakleion; the second crosses the isthmus south to Hierapetra and the Libyan Sea; the third, by a pass east through the mountains, reaches Upper Sitia; ${ }^{1}$ the fourth, following the coast to the northeast, makes connections with the harbors at the east end of the island. These four roads are all natural highways and must have been used from the earliest times.

If, from this brief description, the lay of the land is clear, and if we bear in mind the fact, which is now pretty well established for Crete as for Cyprus, that the people of the Bronze Age preferred to dwell in the lowlands, while their ruder successors at the opening of the Iron Age retired to the mountains for security, we may expect to find Mycenaean and pre-Mycenaean remains in Kavousi plain, and Geometric settlements on the heights above. Such was our experience of last spring.

At a place called "St. Antony's" ("A $\gamma \omega o s$ 'A $\nu \tau \dot{\prime} \omega \iota o s$ ), in the line of low hills to the west of the plain, we began our excavations. The hillside is steep and very rocky. Our first aim was to dig back of a well-preserved piece of Cyclopean wall, in hope of finding a building. Three trial pits were sunk here with no results, and probably this is an ancient terrace-wall like those at Goulas. On a terrace about 15 m . above the foot of the hill we dug nine pits averaging 3 m . long, 1.75 m . wide, and 1.35 m . deep, down to the live rock in every case. At about 0.30 m . below the surface we came upon fragments of pottery, and these continued to a depth of about 1 m ., where they stopped, except in the case of pit No. 6, where we found them as deep as 1.80 m . These fragments deserve study. They include many pieces of coarse unglazed ware, parts of large jars and of pithoi, some of them imperfectly baked. These are without pattern except in

[^2]two instances, - one a coarse incised herring-bone pattern on the rim of a pithos, the other a moulded wave-pattern laid on to a jar. There are also many fragments of finer ware, which fall within the series of Island Pottery, best illustrated by the finds of the British School at Phylákopi. ${ }^{1}$ The best specimen is a small bowl about 4 cm . high, ${ }^{2}$ of fine light lemon-yellow clay, glazed, with a pattern of bands and wavy lines painted in black. Among the decorations, which are painted in red and black on this finer pottery, are bands, dots, and spirals, several plant designs, and a dotted fish-scale pattern. In some of the spiral designs a white line is painted on the red, following the curve. The fish-scale pattern was found on five fragments that must have formed part of a large jar. The clay is pink, with a slight glaze, on which the pattern is painted in reddish black. Unfortunately we found at St. Antony's only broken pieces, and these lying haphazard in the midst of rocks, - pieces of the same vase were unearthed 10 m . apart. The inference is that at a very early date this broken pottery was thrown in to help build the terrace.

Although these potsherds gave proof enough that a settlement of the Bronze Age lay somewhere in the plain, I did not feel justified in spending much of the short time at our disposal in looking for it, since the indications above ground were very slight. We therefore turned our attention to the heights above the village, where we were sure of finding remains of the Geometric period.

Earliest in date are a house and a necropolis of small tholostombs on "Thunder Hill" (Bóóva). This hill lies south-southwest of Kavousi, and rises to about 330 m . above the sea. Our workmen began digging on the top of the hill, where many bits of ancient wall appeared above the surface. The space excavated was about $20 \mathrm{~m} . \times 15 \mathrm{~m}$. Below the crest of the hill, on the southeast side, is an excellent stretch of wall ( 1.20 m . high, 13 m . long), and above this what appears to be a storeroom, where

[^3]parts of three large pithoi with moulded designs of the common serpentine patterns were found. Of the principal building on the summit little can be said. It seems to be a large house with a forecourt, but the plan cannot be made out in the present ruined condition of the walls. One room contained a considerable amount of iron, one pick, one axe-head, a sword complete in seven pieces, and numerous fragments.

While the rest of the workmen were engaged in clearing the summit, with little reward for their labor, four men had been set to work in two pits, which we thought might be ancient wells. They soon proved to be ruined tholos-tombs. ${ }^{1}$ The first (Tomb A) had been thoroughly ransacked and yielded one soapstone whorl only; the second, ${ }^{2}$ although partly fallen in, was protected by several large blocks of stone, and to this accident we owe the recovery of thirteen vases practically entire, two bronze rings, two terra-cotta whorls, and many good frag-

[^4]ments of pottery. Parts of three skeletons, including one skull in good preservation, were taken from the tomb. In the course of the afternoon, three more tombs were discovered. Of these, two yielded nothing (Tomb C and Tomb D); the third ${ }^{1}$ still contained a bronze hairpin, parts of bronze fibulae, pieces of iron blades, and an iron hilt, as well as ten vases and numerous fragments, some of which can be fitted together. It is strange that anything should have remained, for the upper half of the tomb was entirely destroyed and the lower half was filled with the fallen stones.

On the following day, two boys were digging in a place which appeared to me quite unpromising; they were new at the work and I did not like to transfer them at once to another spot for fear of discouraging their zeal, which was admirable. The trench they were digging was blocked by a pile of stones jutting in irregular lengths at all angles. Suddenly it was discovered that by removing these stones they had made a window in the side of a "bee-hive" tomb. The tomb ${ }^{2}$ remained as it
${ }^{1}$ Contents of Tomb 2, Thunder Hill, in addition to ten vases, were :
a. Bronze hairpin, 0.105 m . long.
b. Bronze fibulae (broken).
c. Bronze fragment, shaped like a fish-hook, probably the end of a pin or ring.
d. Iron hilt (broken).
e. Iron blades (broken).

[^5]had been left almost three thousand years ago. Looking in, we saw a large pithos, ${ }^{1}$ whole, lying upon its side surrounded by vases, with four skeletons stretched out beside it, their heads toward the south, away from the dromos. Three of the skulls are well preserved, the fourth is partly disintegrated. In the jar there were no bones - nothing, in fact, save earth, a small quantity of black ash, a broken bronze fibula, and three pieces of iron blade. There was no regularity in the placing of the vases; some of the smaller were set inside larger ones. Forty vases were handed out through the "window" made by the pick, but it was necessary to open the tomb from the top in order to remove the pithos without breaking; for although the huge jar must have been brought in through the dromos, it could not be taken out that way with safety. With the vases were found parts of iron swords and spear-heads, a clay whorl, and a soapstone whorl; and when the earth which had drifted into the tomb was sifted it yielded a bronze bracelet, five bronze fibulae, and a bronze ring.

Finally, some distance to the south, we excavated a space which is called by courtesy a tomb (No. 4), because of the presence of a lintel and a few stones that formed the sides of the dromos. The rest of the tomb has vanished, but by a miracle eighteen vases wedged in between fallen stones were saved, and among them are some of the best pieces from Thunder Hill. We also recovered from this place one bronze fibula and parts of two others, two bronze rings, a bronze hairpin, three pieces of thin bronze plate with an

[^6]indented pattern, fragments of bronze and iron, and a soapstone whorl. ${ }^{1}$

The pottery from Thunder Hill is being studied by Miss King, the present Hoppin Fellow at Athens, and I shall leave to her all detailed description of the vases, confining myself to a few general remarks on form and decoration. (Cf. Plates I, II.) The shapes are Mycenaean or even earlier ; they include three false-necked amphorae (Bügelkanne), three bird forms, two gourds, primitive amphorae without base, jugs which are variants of types found at Troy, ${ }^{2}$ a teapot form which is Mycenaean, low jars developed from a type found at Tiryns ${ }^{3}$ and in pre-Mycenaean graves at Corinth, ${ }^{4}$ "a flat bowl with sharply recurved rim," resembling the Melian bowls, ${ }^{5}$ a twohandled cup closely resembling cups from Mycenae and Rhodes, ${ }^{6}$ and finally, numerous examples of the primitive crater. ${ }^{7}$ But although the shapes of these vases were already popular in the Bronze Age, their decoration belongs to the period which followed; yet in the Geometric designs painted on them we observe that curved lines are still preferred to straight, indicating a time not long subsequent to the Mycenaean.

This early date receives further confirmation from the metal finds. In the bronze fibulae (Fig. 3) we have an interesting
${ }^{1}$ Contents of Tomb 4, Thunder Hill, in addition to eighteen vases, were :
a. Bronze fibula (point broken), 0.093 m . long.
b. Bronze ring, with small hooked points and knob at middle of the hoop, diameter, 0.025 m .
c. Bronze ring (one hook broken), diameter, 0.025 m .
$d$. Bronze hairpin (end broken), 0.072 m . long.
$e$. Two bronze fragments, shaped like fish-hooks.
$f$. Three pieces of broken bronze plates, with indented pattern and holes for fastening.
g. Fragments of bronze and iron.
$h$. Soft soapstone whorl, diameter, 0.02 m .
${ }^{2}$ Perrot et Chipiez, Histoive de l'Art, vol. VI, p. 900.

* Schliemann, Tiryns, Fig. 7.
${ }^{4}$ A.J. A. Second Series, I (1897), p. 320, I, 11, p. 321, II, 2.
${ }^{5}$ Annual of the British School, IV, pp. 36 and 43.
${ }^{6}$ Perrot et Chipiez, Histoire de l' Art, vol. VI, p. 549.
${ }^{7}$ Orsi, A.J. A. Second Series, I (1897), pp. 252 ff.
development of style from the earliest examples, which, like certain brooches discovered by M. Kavvadias in a cemetery at Salamis, are made on the primitive pattern ${ }^{1}$ (except that the bow is much more bent), to a second


Figure 2.-Fibulaf from Tomb 3, Thunder Hill. variety with a twisted bow, and to a third which has the bow flattened. A simple form of ornamentation occurs on the bronze bracelet (Fig. 3), where the metal is drawn out, twisted, and knotted. One ring is circular, the others have hooked ends which clasp; in two instances there is a knob at the middle of the hoop (Fig. 3). Turning from the bronze ornaments to the iron weapons, we are surprised by the modern appearance of the pickaxe, but its claim to antiquity cannot be disputed, since one exactly like it was taken from the tholos-tomb discovered by Theodosios Mitsakis. The iron sword (Fig. 4) is of an early pattern following close after the Mycenaean ; hilt and blade are of one metal, but a reminiscence of the days when a blade of bronze was inserted in a hilt of wood, ivory, or bone, lingers in the sharp outlines of the handle and the raised rim, which is continued on the upper


Figure 3.-Bronze Bracelet frum Tomb 3, Thunder Hill: Bronze Ring from Tomb 4, Thunder Hill. -Scale 71 2 : 20. part of the blade as if enclosing it. All indications justify us in assigning the house and tombs on Thunder Hill to the sub-Mycenaean epoch, transitional between the Bronze Age and the Iron Age. ${ }^{2}$

[^7]Of somewhat later date is a little castle perched at the extreme northern end of the Thriphte range which, as has been said, rises like a wall behind Kavousi. This peak has long been called "Citadel" (Ká $\alpha \tau \rho o \nu)$ by the peasants, because of the ancient walls which they noticed on its steep, rocky sides. On the adjacent slope, II $\lambda a \gamma i ̀ ~ \tau o \hat{v}$ Káó $\tau \rho o v$, is situated the tholos-tomb which was reported to Mr. Evans. Comparing Mr. Evans's estimate with my own and with altitudes given by Raulin and Spratt for other points in the same range, I have given 700 m . as the approximate height of the Kastro above the sea. The upward slope from the slight eminence on which the village stands is exceedingly steep. It took our mules more than an hour to make the ascent, and at one point it was necessary to dismount for pity's sake, as well as for safety. At the Ridge, the mules had to be abandoned, and the top was reached by a hand and foot scramble. This summit is 70 m . long north and south, and 40 m . wide east and west. On the north the descent is precipitous; the western slope is also very steep, only one small terrace can be cultivated; on the eastern side the ground falls less abruptly,


Figure 4. - Iron SWORD FROM House, Thunder Hill. - Scale $3 \frac{3}{4}: 20$. and at several points has been terraced and planted with barley. The only approach is from the south by way of the Ridge.

On this almost inaccessible height an early chieftain built his house (Fig. 5). The thirteen rooms uncovered by us occupy the entire width of the summit and about two-thirds of its length. The southern end of the peak is far too rugged for building purposes, and even in the northern part seven different levels were necessary, rising from north to south, as is shown by the vertical section which accompanies the plan.

Probably these rooms do not all belong to one house, but there is no difference in their construction that would permit us to assign some to masters and others to servants, as at Tiryns. Rooms 10, 11, and 12 are more irregular than the others, but this is probably due to the lay of the land only, since in Room 11 were found some of the best fragments of pottery. We are left quite in the dark as to the use of the various rooms, for the plan of the house is rambling, following no canon of courts and forecourts, and there is not a single hearth, bath, or column-base to guide us, nor did we receive any certain light from the potsherds and few household objects which were turned up by the spade. ${ }^{1}$

Doors and stairs are but scantily provided. Of the latter, the flight at $a$ is excellent; the stairs at $i$ are not so good, while those at $k$ are marked "steps" in deference to the opinion of the workmen rather than from my own conviction, for here the stones stand at a sharp angle and cannot have been laid in this position, although they may have been used for going up and down. A good corridor leads along the
${ }^{1}$ In the northeast corner of Room 2, at point $c$, there is a rock platform nearly square ( $1.50 \mathrm{~m} . \times 1.40 \mathrm{~m}$.) , raised a few centimetres above the threshold to the east.

It has been suggested that Room 6 may have been a portico. The wall which we found standing, from $e$ to $f$, was of wretched construction, evidently built later than the other walls. When destroyed, it left a clean end at $f$, and a good threshold from $e$ to $f$. On this threshold may have stood a wooden column to support a porch roof. The approach would then have been from the corridor by means of steps and a platform cut in the natural rock, of which we have remains at $d$, through the portico and the door $g$ to Room 5 .

In Room 7 we came upon a number of terra-cotta and stone weights used for weaving. This may have been a workroom for the women of the family.

In Room 8 a large pithos was found almost complete, similar to those in the storerooms of the palace at Cnossus.

In space $h$, at a depth of 0.50 m . below the level of Room 6, we came upon many potsherds (among them the top of a "stirrup jug" and coarse pieces with moulded patterns); charcoal was mixed with the sherds. At point $h$ there is a natural cleft in the rock, which would make an excellent hearth. This was full of charred earth and pieces of inferior pottery that seemed to be parts of cookingvessels. Possibly we have here the kitchen of the establishment.

On the earthen floor of Room 11, blocks of stone are laid so as to form an oblong $0.75 \mathrm{in} . \times 0.60 \mathrm{~m}$. We raised the blocks, but found nothing under them.


Figure 5. - Citadel of Kavousi. Plan and Vertical Section.
west side of the upper buildings, and probably there was one on the eastern side also, but here the ground has fallen away, carrying with it the eastern walls of several rooms and leaving no trace of an approach from this direction except a good doorway in the northeast corner of Room 2. Such a corridor, with doors leading from it, would have given access to Room 3 and indirectly to Room 4, which are at present entirely cut off.


Figure 6. - Citadel of Kavousi: Wall and Doorway between Rooms 9 and 10.

The uneven line to the right of the plan represents the edge of the rock. Room 8 occupies the whole of a second platform 3.20 m . below the level of Room 7, and Rooms $9,10,11$, and 12 are on a still lower level, from which the rock descends precipitously on the north. A good piece of wall was excavated just below point $j$. The spaces between Rooms 5 and 7 and between Room 7 and the lower series of rooms have not been dug out ; they seem to be mere masses of rock. The walls of the buildings have an average thickness of 0.50 m ., and are of
wretched construction, being built of slabs of local shale bonded with clay (Fig. 6).

Among the objects ${ }^{1}$ used by the dwellers on this peak were milk-bowls of the type described by Myres and Richter in their Catalogue of the Cyprus Museum, false-necked amphorae of the well-known Mycenaean form but with Geometric decoration, trumpet-shaped funnels of coarse clay, admirably adapted for drawing liquids from large pithoi, stone and clay weights for looms, a soapstone knife-sharpener, pumice for cleaning knives, large stones for bruising corn, and stone bowls for pounding corn. That these mountaineers enjoyed quiet amusement is proved by a stone and clay "counter" found in Room 1 (Fig. 7), which must have been used for some game like draughts or roulette. The stone is a slab of shale 0.115 m . thick, which forms a rude square with a diagonal of about 0.50 m . On this stone a circle is marked, and within its cir-

1 The single objects found on the Citadel were as follows :
a. Stone table for a game (fully described above).
b. Whorls : one of soapstone, diameter, 0.035 m .; four of clay, diameter about 0.02 m .
c. Four round clay blocks, diameter, 0.04 m . to 0.08 m . ; thickness, 0.01 m . to 0.025 m . (one with incised lines).
d. Oblong soapstone block (for sharpening knives ?), 0.07 m . long, 0.04 m . wide, 0.03 m . thick ; two grooves 0.005 m . deep, forming a Christian cross, are cut on one face of the block.
$e$. Soapstone knife-sharpener, 0.195 m . long, 0.03 m . wide, 0.025 m . thick.
$f$. Bronze rivet, diameter, 0.014 m .
$g$. Stone ring-weight, diameter, 0.09 m . ; thickness, 0.035 m .
$h$. Clay weight in form of truncated pyramid, with square base 0.10 m . on sides; height, 0.13 m . suspension hole, 0.055 m . above base. Also two pieces of a similar weight, broken across through hole.
i. Round clay weight, hole in centre.
j. Body of stag (?) in terra-cotta, 0.06 m . long, 0.035 m . high.
k. Clay funnels, trumpet-shaped:
(a) 0.21 m . high (top broken).
(b) 0.25 m . high (broken half across bottom, and handle broken).
(c) 0.18 m. high (ends and handle broken).
l. Large stone for bruising corn.
$m$. Three stone weights with holes.
$n$. Three pieces pumice stone.
o. Rudely spherical stone, greatest diameter, 0.047 m . Rudely circular stone, greatest diameter, 0.075 m . ; thickness, 0.025 m .
cumference are ten round "holes," made by scratching circles and scooping out their centre ; the "board" is divided into halves by a straight line, five holes on each side. At the ends of the dividing line and in the centre of the circle there is a rude attempt at decoration by oblique lines. The clay


Figure 7. -Stone Table for Game and Game Counter from Citadel, Rоом 1.

Length, measuring along line, .50 m ., thickness, .115 m. Game counter: diameter, .033 m ., thickness, $.0015-.002$; of clay, light pink-stripes in bluish black.
counter (diameter, 0.033 m. ; thickness, 0.002 m .) exactly fits the holes in the stone. We have here, I believe, the earliest circular "board" yet found in Greek lands. The dividing line reminds us of the í $\rho \dot{a} \gamma \rho a \mu \mu \grave{\eta}$ of $\pi \epsilon ́ \sigma \sigma o s$, the game which is being played by the Ithacans when Athena visits Telemachus
(Hom. Od. I, 107), the only game whose Greek authorship was undisputed (Herod. I, 94).

Many fragments of pottery prove by their designs that the buildings date from the Geometric period. Concentric circles are of frequent occurrence; a row of them is found on two fragments which give parts of a floral design that seems to be an inheritance from an earlier art. We found only one entire vase on the Citadel. This was an amphora, made of inferior clay, unglazed, undecorated, which fell into many pieces as soon as the earth about it was withdrawn. Two small funnels, ${ }^{1}$ partially broken, of light grayish brown clay, thin, unglazed, decorated with incised rosettes sparsely scattered on the field, attract attention by their delicacy, but in general the pottery is coarse, such as would befit the daily use of a rude people.

The lord of this castle seems to have saved his best to be buried with him in a tholos-tomb which lies about half a mile southeast of the Kastro, on "Rusty Ridge" ( $\Sigma \kappa о v \rho \iota a \zeta \mu e ́ v o \varsigma) . ~$ The rediscovery of this tomb was the most important result of our work at Kavousi, since in point of construction and in the character of its contents it represents a higher stage of civilization than any other of the remains which have come to light in that neighborhood. I say "rediscovery" because a peasant found the tomb forty years ago by accidentally removing the capstone and falling into the vault. Badly frightened as well as hurt, he did not at first remove the treasure which was in the hole. Little by little, the secret leaked out; an antiquity dealer from Herakleion is said to have bought ten vases, and these are probably in European collections to-day; a clever priest took many swords, vases, etc., and sent them to his son, a priest of the Holy Sepulchre, who is supposed to have disposed of them in Jerusalem; several villagers claim to have had knives and jars from the same treasure. At length, having removed all the objects which seemed to him of value, the peasant replaced the slab and built

[^8]his house above it, without knowing anything of the real nature of his discovery. Mr. Evans had heard rumors of a "cave" near Kavousi, and in mentioning it to me, he added, "Don't depise caves; the best things in Crete have been found in them." When I learned from the villagers that the "cave"


Verrical section

Figure 8. - Beehive Tomb at Rusty Ridge near Kavousi. was nothing but a "hole in the ground" under a peasant's house, it seemed hardly promising. Yet I determined to look into it, and by the Demarch's order, Michael Kassiotis opened his house to us and pointed out a large slab which, he said, covered the "hole." In order to remove the slab it was necessary to destroy part of his wine-vat, which was well built and cemented. The wisdom of doing this seemed doubly doubtful, because he assured us that everything had been taken out of the "hole" years ago. Curiosity prevailed, however ; the slab was raised, and we were rewarded by the sight of a "beehive" tomb, whole and of excellent construction (Fig. 8). The dimensions are:

Diameter, 2.90 m .; height, 2.20 m .
Width of entrance below, 0.70 m .; above, 0.38 m . Height of entrance, 1.10 m .

Length of dromos, as far as cleared, 1.70 m .
The lintel is a single stone, curving inward. Its length as far as it protrudes from the wall is 0.88 m ; thickness, 0.08 m .

There are eleven courses of stone below the lintel and twelve above.
The average size of the stones is: length, 0.40 m .; thickness, 0.08 m ; their width could not be determined as there is no break in the wall. The stones are not hewn, but are fairly regular in shape; the chinks are filled not with smaller stones, but with earth.

The floor is earth.
The capstone is a slab measuring in greatest length, 1.17 m ; greatest width, 0.70 m .; thickness, 0.09 m . Shape $\square$.

A first glance showed that although the tomb had been ransacked, not everything had beeen taken. ${ }^{1}$ Two of our best workmen went down and by torch-light cleared the tomb completely. We were able to recover a hydria, a barrel-shaped
${ }^{1}$ Contents of the tomb on Rusty Ridge were:
$a$. Hydria, 0.054 m . high ; clay, pink, with lemon-yellow slip ; decoration in black; two panels on shoulder, on one side three women with arms upraised ; on the other a man, lash in hand, driving a chariot. (Put together out of more than thirty-five pieces.) (Plates III, IV.)
b. Barrel-shaped vase with four handles, 0.37 m . high ; clay, pink ; decoration in lustrous black, turning to red; the concentric circles and the stripes on the handles are in white paint ; two panels between adjacent handles have a swan, the two others are plain. (Put together out of more than twenty pieces.)
c. Amphora with two handles, each handle in three parts; lower half of amphora gone ; the remaining part is about 0.35 m . high; clay lemonyellow; decoration bluish black.
d. Amphora same height, same description as $c$; only one side remaining.
$e$. Gold button : diameter, 0.02 m .; height, 0.009 m .
$f$. Blue glass bead, translucent, diameter, 0.018 m .; height, 0.01 m . Also six whole beads and one broken bead of this same style, more and less translucent.
g. Bronze arrow-head, 0.049 m . long, two barbs.
$h$. Bronze arrow-head, 0.057 m . long, one barb damaged.
i. Two pieces of gold leaf, no pattern.
$j$. Two pieces of very thin translucent blue glass.
$k$. Nine pieces of thin bronze plate, with design of men and beasts. (Figs. $10,11$.
l. Nine pieces of thin bronze plate, curved surfaces, with beaded edge, probably parts of greaves.
$m$. Two iron swords; two iron sword-handles; one iron sword-point; two parts of iron sword-blades ; one iron sceptre-handle (?) ; two pieces of iron and one of bronze, use unknown.
$n$. Seven iron lance heads, hollow at lower end, in some instances still containing bits of the wooden shaft ; two iron axe-heads ; one stone axehead; three pieces of silver lead; one bronze hook; many broken pieces of iron.
o. Broken vases (in addition to the ones mentioned above) and many fragments of pottery. The Geometric patterns on these fragments are of great variety. One P-shaped pattern - which, if not unique at Kavousi, is at least extremely rare - occurs also on sherds from the Citadel, and helps to establish a close connection between the tomb and the Citadel buidings.
$p$. Several bones of animals, among them a boar's tusk.
In addition to the above objects, which we ourselves took from the tomb on Rusty Ridge, we obtained from the villagers, Michael Kassiotis and Christodoulos
jar with four handles, two erect and two horizontal, parts of two amphorae interesting for their decoration, parts of other vases awaiting reconstruction, numerous fragments of pottery, as well as iron swords, spear-heads and belt attachments, bronze arrow-heads and plates of bronze. There were no fibulae, but a single gold button remained, also pieces of gold-leaf, of translucent blue glass, and beads of blue glass more or less translucent;
fragments of the so-called Egyptian


Figure 9. - Jug from Beehive Tomb on Rusty Ridge. porcelain seem to indicate transmarine connections.

In these finds, the Geometric style is fully developed (see above, pp. 126, 127); sword hilts are of a later type than the one shown from Thunder Hill. The vases are of more advanced form, have a good glaze over the pink clay, and are elaborately ornamented. A swan of the familiar Dipylon style occurs on the barrelshaped jar above mentioned. The most interesting vase is the hydria, on one side of which the artist has painted three mourning women, on the other a man driving a chariot, probably a pair, although only one horse is seen (Plates III, IV). This is the first Geometric vase with human figures to be found in Crete. These subjects, as well as the general ornamentation of the hydria, recall Athenian vases in the Dipylon style, but there

[^9]are differences, and differences which may come to be considered as characteristic of Cretan art: first, the survival of Mycenaean influence in the rhomboid, each point finished with a double scroll, a pattern which Wide has already discussed in his "Nachleben Mykenischer Ornamente," where he traces it back to Mycenaean gold ornaments ; second, the greater naturalism of the figures, both human and animal, as compared with the Dipylon figures. A similar fact has been noted in comparing the Mycenaean finds at Cnossus with those from the mainland.

Of special interest are fragments of thin bronze plate engraved with a wellexecuted design (Figs. 10, 11). The motive is Oriental, but the style is Greek. The field is divided into bands, Oriental fashion, and is filled with sphinxes, having backturned, helmeted heads; griffins with upstretched necks (a fine heraldic type), and a recurring combination of a man, with one or two lions rampant. With perfect mastery of his art, the engraver has given individual expression to


Figure 10. - Piece of Bronze Plate from Beehine Tomb at Kavousi. (Compare Figure 11.)
each figure; one of the lions is especially remarkable as a picture of snarling resistance, executed in miniature with a few lines; the human figures are strong, lithe, and dignified. The style appears to me to resemble that of a gold diadem found in a grave at the Dipylon, to which Brückner and

Pernice in the Athenische Mittheilungen for 1893, ascribed a Greek origin. ${ }^{1}$ Evidently the mountain chieftain buried in this tomb was a man of taste.


Figure 11. - Designs on Bronze Plate from Beehive Tomb at Kavousi. Drawn by E. Gillièron. (Compare Fig. 11.)

[^10]Turning back to the southern slopes of the Citadel ( $\Pi \lambda a \gamma i$ тov̂ Káatpov), one finds himself close to the terraced patch of barley where Mitsakis discovered the tomb whose contents Mr. Evans will publish. On this terrace and on three terraces below it our men dug in the hope of finding other tholos-tombs. Here and there they unearthed good ancient walls, which led -nowhere; the earth had all been "worked," and was very loose, being full of stones, the ruins of broken-down tombs or houses. A few potsherds and some terra-cotta animals were our only reward.

These animals are sufficiently curious to excite interest as to the place where they were found. It is a rocky ledge 10 m . long by 4.50 m . wide, 40 m . northeast of the tomb just mentioned, separated from the terrace by uneven ground. Near its centre is a piece of old wall, partly fallen, 2.20 m . long, 0.65 m . wide, 0.50 m . high. A shorter piece of the same width and height, in better preservation, lies near the southwest end of the ledge, and in the southern corner there is another small section, 0.80 m . long, 0.60 m . wide, 0.50 m . high, built against the bank of rock and earth which forms the back of the ledge. These remains do not look like parts of a tomb, but favor rather the idea of a small shrine. The animals were found under light earth not deeper than 0.35 m . Much of the earth was black from having been burned, chiefly in a line between the first and third pieces of wall, especially in the southern corner; mixed with the charred earth were potsherds and bits of charcoal. The animals found on Citadel Slope are pictured in Plate V. Beginning on the left of the plate, we have:
a. Stag (?), front legs and tail missing; 0.16 m . high to top of head; 0.17 m . long from nose to tail.
b. Bull's head ; forehead, 0.12 m . broad.
c. Bull (body and head stuck together, legs broken); 0.21 m . long, 0.245 m . high.
d. Bull, sitting on haunches, legs broken; 0.31 m . high.
e. Bull's head and neck; forehead, 0.095 m . broad.
$f$. Bull's head and neck ; forehead, 0.095 m . broad; curious mark $\mp$ on face.
g. Dog (?), one front leg, one ear gone; 0.085 m . high ; 0.013 m . long.

In addition to these, there are three necks of bulls, with the pattern $E_{i}$ incised, as in Plate $\mathrm{V} c$ and $e$; the body of a bull standing, as in Plate V $c$; the body of a bull sitting, as in Plate V d, with a round hole in the top of the neck, as if the head had been fitted into it ; the hind part of the body of a bull sitting, as in Plate V d.

Contemporaneous with the house and tombs on the Citadel and Rusty Bridge are the oldest remains on Azoria Hill (Movpi $\boldsymbol{\tau}^{\prime}$ 'A $\zeta \omega \rho \gamma \iota \hat{a}$ ), southeast by east of Kavousi, north by northeast of the Citadel, about 330 m . above the sea. It is a hill with steep sides and round top, shaped like an old-fashioned sugarloaf ; a lower spur juts out to the north, and on the south there is a small plateau by which the top is reached from the valley. The etymology of the name Moupì $\boldsymbol{\tau}$ ' 'A $\zeta \omega \rho \gamma \iota \hat{a}$ is difficult; the peasants do not try to explain it-" "ìvaı тoтo日єбía," they say, but I was told by the Eparch of Hierapetra that Movpi means "hill," and that $\dot{a} \zeta \omega \rho \gamma \iota \hat{\alpha}$ is another name for $\dot{a} \nu a ́ \gamma v \rho \iota s$, a shrub which grows in abundance on the hillside. Standing at the entrance of the gorge through which passes the road to Ronkaka, Azoria Hill commands the direct route between Central and Eastern Crete. One is not surprised, therefore, to find that it was occupied and defended in very early times. On my first visit to Kavousi, this site had especially pleased me, for the slope is covered with ancient walls, some of which deserve to be called Cyclopean, and on the top was a very promising earth platform. To this platform we directed our attention early in the campaign. The earth was light. A few hours' digging revealed intricate walls, a puzzling mixture of curves and straight lines. I shall not try to describe our surprise as one circle after another was cleared, or to mention even the conjectures to which they gave rise, but I will let the plan speak for itself (Fig. 12), adding only the necessary words of explanation.

The summit measures 20 m . north and south by 15 m . east and west. Almost in the centre ( 1 m . south of the centre) lies the middle point $A$ of a circular building ('Newest' on the plan),


Newest structures (1, 2).
Oldest structures $(4,5,7, \mathrm{D})$.
Intermediate structures (3, 6, 8, 9).
Figure 12. - Plan of Buildings of Azoria Hill, near Kavousi.
which is, at the same time the most noticeable and the newest structure on the hill. This building consists of walls forming two concentric circles - the inner (1) has an inside diameter of 2.35 m . and is 0.50 m . wide; the outer (2) is of the same width and has an inside diameter of 5.35 m . Wall 1 (greatest height 0.90 m .) has five to seven courses of oblong stones irregularly laid; wall 2 (greatest height 1 m .) has seven courses. The construction of the two walls is the same, very inferior work. The builders began to lay the courses at different levels, but certainly not more than two courses of the walls as they stand to-day were meant to be seen. The stones are laid either along or across the walls, seldom extending through; typical dimensions are $0.41 \mathrm{~m} . \times 0.20 \mathrm{~m} . \times 0.20 \mathrm{~m}$. Much earth is used for filling.

Within the inner circle and about 0.60 m . below the present top of wall 1, we came upon straight walls of a very different style ('Oldest' on the plan). These walls are 0.60 m . wide. Four courses remain ; of these the two lower seem to belong to foundations, the upper two were meant to be visible. There appears to be an attempt at "header and stretcher" construction in alternate courses. The blocks are rudely rectangular and there is little earth between them. We dug the pit inside the inner circle to a depth of 2.70 m ., i.e. more than a metre below both sets of walls. The only finds were animals' bones, fragments of pottery, charcoal, and, at a depth of 1.60 m . (on a level with the bottom of the straight walls), in a place that showed distinct signs of burning, five large round-headed iron nails, all bent at a right angle. Close to this spot but just on the outside of wall 1 , two more nails, precisely similar, were found. The inference is that the nails were there before wall 1 was built, and are contemporaneous with the straight walls which I believe to be much older than the circular walls. These straight walls are continued in the space between walls 1 and 2 and wherever else the shading as in 4 is used in the plan. Whether $B C^{\boldsymbol{r}}$ is also continued outside of wall 1 , I cannot say, since it did not seem best to destroy the platform that makes
the entrance to the later circular building, whose doorway, I may add, faces due east.

To the earliest period belongs also a round, hard, gray stone, $D$ on the plan, in diameter 0.50 m ., in thickness 0.20 m ., which seems to be in situ; also the polygonal wall, 4 , of which only one badly damaged course remains.

A third period, between the earliest and the latest, is represented by a third circular wall 3 (diameter about 10.30 m ., width 0.92 m .). Between points $a$ and $b$, six and seven courses remain on the north side of the wall, and the height in one place is 1.38 m . But in a large portion of the circle, only the foundation course is left ; this is often reduced to single stones, and in the northwest quadrant is interrupted several times. The foundation course is built in polygonal style, of large rocks rudely fitted to each other ; typical dimensions for the face of one of these rocks are $0.65 \mathrm{~m} . \times 0.40 \mathrm{~m}$. On this foundation oblong blocks or slabs are laid (typical dimensions, 0.30 m . long, 0.20 m . thick). While there are seven on the outer side of this circle at $a b$, on the inner side there are only three, for here wall 3 rests upon straight wall 5 , which is a part of the earliest building.

Since wall 6 rests upon straight wall 7 and is itself partly covered by circular wall 2 , I have classed it with the large circle, of which it is almost a diameter, in the intermediate period, and to the same epoch I have assigned the walls lying to the north of the large circle. Finally, the cistern may belong to either the first or the second period. Its diameter is 3 m .; the surrounding wall is 0.50 m . thick and is lined with a firm white stucco, 0.04 m . to 0.05 m . thick; its height varies from 0.85 m . to 1.60 m ., since the upper part is broken away. The floor of the cistern is made of the same white stucco as the sides. A bronze hairpin was the only thing found in the cistern.

At first sight, the position, shape, and construction of the circular building suggest a windmill, and M. Hazzidakis tells me that in old times the windmills of Syros all had double
walls - the space between the two serving as a storeroom and that one such mill still exists at Melos. ${ }^{1}$

But of the antiquity of the building whose walls are shaded as in $4,5,7, D$ on the plan I think there can be no doubt. Designs of the early Geometric period with many Mycenaean survivals are frequent on the pottery turned up on the site, and near one of these walls, the body of a "sitting bull" was unearthed, which defied all our guessing until the animals were found on Rusty Ridge (see Plate V d), when it was immediately recognized. In fact, the only objects that suggest "late" connections are pieces of a pithos with a pattern that may be Hellenistic, and three broken lamps. We did not come upon a single coin or potsherd of Byzantine, Venetian, or Turkish times. ${ }^{2}$

A late stage of Geometric art is represented by a few vases (three whole and five broken) which were dug up at a place called "Great Boulders" (Xovס $\rho \circ \beta$ одда́кєs), halfway between Thunder Hill and Azoria Hill, in shaft graves. There were four of these graves, close together; their length averages 2.60 m ., width 0.70 m ., the thickness of the walls is 0.50 m . and their present height not more than 0.35 m . Only the lower part of the graves remains. The earth which filled them is black and as fine as powder, the result of burning; no bones were
${ }^{1}$ Circular towers have been noticed on other of the Cyclades:
Thera, Ross, Inselreisen, I, 43. Weil, Ath. Mitt., I, 335, and II, 62.
Naxos, Ross, Inselreisen, I, 43.
Myconos, Ross, Inselreisen, II, 31.
Siphnos, Ross, Inselreisen, I, 146.
But these towers are built of squared blocks of marble, and belong to Hellenic times. The closest resemblance to our structure in place is with a circular building on Amorgos. See Tsountas and Manatt, The Mycenaean Age, p. 261, Fig. 136.
${ }^{2}$ Aside from the bronze hairpin, the lamps, and the body of a bull mentioned above, the other single finds from Azoria Hill were :
a. Three bronze nails with round heads, diameter of head about 0.015 m .
b. Bronze skewer (?), 0.12 m . long.
c. Bronze hook with three knobs and a cleft end, 0.035 m . long.
d. Iron arrow-head, 0.02 m . long, one barb broken.
e. Soapstone whorl, diameter, 0.025 m .
$f$. Gray stone, ribbed for rubbing corn.
found. A small lekythos of the well-known Proto-Corinthian type with Geometric decoration marks the advance in time from the beehive tombs to the shaft graves.

Finally, in order to complete this report, mention must be made of later remains in the region west of Kavousi plain.

At Cape Tholos, close to the shore, stands the church of the Holy Virgin (Mavaría), whose fête ( $\pi a \nu \eta \dot{\eta} \gamma v \rho \iota s$ ) was celebrated during our stay in Kavousi, on Ascension Day. About 3 m . from its northeast corner lies a grave 2.20 m . long, 1.06 m . wide, 1.10 m . deep, made of the local stone fitted with small stones and earth, and lined with plaster. The grave may be either Roman or Byzantine. It had been opened, probably more than once, and aside from pieces of the slab which once covered it ( 0.05 m . thick) and a few bones including parts of a skull, it contained only earth. In the neighborhood are fragments of tiles and coarse red ware, but nothing that can be dated with probability before Roman times. The hills close at hand are rocky, with no depth of soil, and bear no traces of ancient occupation, but on the point to the north of the church there are the walls of several old buildings.

About 100 m . south of this church stands the building which gives its name to the cape. It measures on the outside 57 m . long north and south by 9.30 m . wide east and west. The average thickness of the walls is 1.10 m ., and their greatest height to-day 3.70 m . On the east side there must have been ten buttresses; of these, five, beginning from the northeast corner, are in fairly good condition (average distance apart, 3.80 m .; average thickness, 1.50 m .), four are badly damaged, and the tenth has disappeared, together with the adjoining wall. On the inside there are remains of three cross-walls (average distance apart, 12.60 m .; average thickness, 1.10 m .). The structure is certainly Roman, but in some parts of the outside walls stones are used which probably were taken from an earlier building, and which give to these parts the appearance of Greek work. There is an inner wall of tiles about 0.03 m .
thick, neatly laid. The floor is made of a cement of pebbles about 0.10 m . thick, resting on the live rock. We made openings at several points, in order to learn whether there was any space below the floor, but found none. Probably the peasants are not far wrong when they call this an ancient storehouse ( $\dot{\alpha} \pi \sigma \theta \dot{\eta} \kappa \eta$ ); it may have been one of the granaries from which Rome drew her food supply. Roman gems have been found in the neighboring fields.

Following the line of hills to the southwest, we have already noticed traces of an earlier civilization at the place called St. Antony's ("Aylos 'A $\boldsymbol{\prime} \tau \dot{\omega} \nu \iota o s$ ). Near the bottom of this hill, in a cubic foot of space were found three whole lamps, pieces of eight other lamps, fragments of terra-cotta "icons" and of jugs — all of Roman or late Greek make. The lamps are bowls closed by a "concave perforated cover, with stamped ornament" (Cyprus Museum Catalogue, "Lamps Hellenistic and Graeco-Roman," p. 80); they have a "ring-handle opposite the nozzle" and in two instances a "scroll ornament on each side of the nozzle." One shows Zeus Ammon, full-face, with the eagle wings spread, standing before him (cf. Cyprus Museum Catalogue, nos. 1385-6, and the illustration in Pashley's Travels in Crete, II, p. 21); another, a goddess wearing a turreted crown and bearing a cornucopia; a third, a cock within a wreath of leaves. On one fragment is a bull; on another a sphinx ; on a third, a graceful figure, either warrior or Amazon, attended by a dog. The "icons" measure about 0.10 m . square, have a moulded frame with a ring by which they may be hung, and usually represent a horseman.

Still further to the southwest, on the hill called "Little Villages" (X $\omega \rho \iota o \delta a ́ к \iota a)$, we dug out a lime-kiln, a cistern, and a hydrant of uncertain date, probably Roman. The top of the hill has good ancient walls, noted by Mr. Evans, but these we did not touch. A short distance to the south, at "Harbor Head" (Kєфалó $\lambda \iota \mu \nu o s$ ), we uncovered some poor house-foundations and found potsherds among them. A circular pit lying beneath these foundations contained some pieces of primitive pottery.

Close at hand are two graves cut in the rock. The first, 2.15 m . long, 0.75 m . deep, is broken away on both sides, and contained nothing. The second, 1.90 m . long, 0.75 m . wide, and 1 m . deep, had also been robbed, but the robber had left the four skulls and the bones undisturbed. Pieces of at least. five vases remained. In the bottom of one jug lay a plain iron hoop ring, an iron ring with bezel from which the stone had been taken, and a coin of the Emperor Gallienus.

It appears that the Romans preferred the coast and the low hills to the west of Kavousi for their settlements. Perhaps this land had already been occupied by a primitive people; but this remains a point to be settled by future excavations. It is certain that on the steep heights above the present village, people made their homes almost three thousand years ago, living a life as simple, no doubt, as that of the Sphakiots to-day, but with an instinct for decorating their possessions that gives them a place, however humble, in the history of art.

Harriet A. Boyd.
Smith College, Northampton, Massachusetts, March 6, 1901.

TYPICAL VASES FROM TOMB 3 ON THUNDER HILL. KAVOUSI
TYPICAL VASES




HYDRIA FROM THOLOS TOMB ON RUSTY RIDGE: LEFT SIDE


HYDRIA FROM THOLOS TOMB ON RUSTY RIDGE: RIGHT SIDE



[^0]:    ${ }^{1}$ For Mr. Evans's notes on these sites, see articles published in the Academy of June 13,20 , July $4,18,1896$. A résumé of these articles is given in $A . J . A$, 1896, pp. 462-467 ; Ligortino, p. 466 ; Keraton, p. 465 ; Arvi, p. 464 ; Hierapetra, p. 462.

[^1]:    ${ }^{1}$ Raulin, l.c. I, p. 165, writes of this plateau, where he locates "le village d'été de Krephti" (a mistake for Thriphte, $\Theta \rho i \phi \tau \eta$ ), "le sol formé principalement par des talschistes grisâtres est entièrement occupé par des vignes qui s'elèvent jusqu'a 980 m. , plus haut que partout ailleurs en Crète et à la même hauteur que sur les flancs de l'Etna." Compare I, p. 215, "Les vignobles . . . existent dans les hautes plaines jusqu'a 700 m . à Askyphos, 900 m . à Lassiti, et même 980 m . à l'Aphendi-Kavousi."
    ${ }^{2}$ Compare Raulin, l.c. I, p. 164. He is describing the view which one has soon after leaving Kritsa, on the road to Hierapetra. "La vue est fort belle tant sur l'isthme lui-même, le golfe de Mirabello, que sur les montagnes de Lassiti à l'Ouest et la grande muraille calcaire que s'étend à l'Est, de l'ile de Psyra jusqu'au cap Peristera et par dessus laquelle s'elève la masse conique de l'AphendiKavousi." Also I, p. 361 : "Le massif de l'Aphendi-Kavousi s'etend d'une mer à l'autre, c'est un plateau terminé sur son bord O-N-O par une pente très rapide avec de fréquents escarpements. De la plaine de Hierapetra, et du vallon d'Episkopi, on croit voir une muraille surmontée d'une plateforme sur laquelle dans la partie orientale s'elè̀ve le cone de Kavousi."
    ${ }^{3}$ The height of these hills is given by Raulin, I, p. 363, "colline côtière à l'O. de Kavousi (niveau) 271 m. ."

[^2]:    ${ }^{1}$ Compare Spratt, Travels and Researches in Crete, I, p. 157: "From Vasiliki the northern road follows a valley opening into the Gulf of Mirabello, to the northeast to Kavousi, whence begins the ascent, and by a difficult and rocky mule-path, the mountain barrier to the Sitia is surmounted by a pass."

[^3]:    ${ }^{1}$ Annual of the British School, vols. III, pp. 1-30, and IV, pp. 17-48.
    ${ }^{2}$ This is figured on Plate II, the first piece from the left on the top row.

[^4]:    ${ }^{1}$ The relative position of the tholos-tombs on Thunder Hill is shown by the accompanying diagram. Scale 1:1000. Letters indicate empty tombs; numerals indicate tombs which con-
     about 2 m . on a side, made of stones of good size, fairly regular in shape. At a height of 0.67 m -the square has become a circle, and the dome begins, built of small, more irregular stones. The top is broken in, but the height of the tomb must have been about 2 m . The dromos is 0.85 m . broad; the height of the entrance is 0.80 m . ; the lintel is 1.10 m . long, 32 m . thick, and 0.75 m . wide (broken in two pieces).
    ${ }^{2}$ Contents of Tomb 1, Thunder Hill, in addition to thirteen vases, were :
    a. Bronze ring, with small hooked points, diameter, 0.035 m .
    b. Bronze ring (hooks broken), diameter, 0.02 m .
    c. Clay whorl, walnut pattern, diameter, 0.017 m .
    d. Clay whorl, plain, diameter, 0.025 m .

[^5]:    ${ }^{2}$ Contents of Tomb 3, Thunder Hill, in addition to a pithos and forty vases, were :
    a. Bronze bracelet, diameter, 0.065 m .
    b. Bronze fibula, 0.05 m . long.
    c. Bronze fibula, 0.08 m . long.
    d. Bronze fibula, 0.058 m . long.
    e. Bronze fibula, 0.07 m . long (point broken).
    $f$. Bronze fibula, broken in two pieces.
    g. Bronze ring, 0.02 m . diameter.
    h. Iron spear-head, with broad blade.
    i. Iron sword-handle.
    $j$. Iron sword-point, 0.14 m . long.
    $k$. Iron spear-head, hollow.
    l. Soapstone whorl, with two holes.
    $m$. Clay whorl in form of truncated cylinder, with two incised rings; height, 0.018 m . ; diameter, 0.02 m .

[^6]:    ${ }^{1}$ Pithos, height, 1.11 m. ; six handles, three above and three below; four raised bands, the three upper ones decorated by herring-bone pattern incised, the lowest by vertical lines incised; around the neck of the jar, an amulet. Three small square holes have been cut on one side of the vase, one above the other, in the spaces between the raised bands. These may have served as spigots if the pithos was originally intended for household use, or they may have had a use similar to that of the round holes in the bottom of the ossuaries found at Anoja Messaritica, "qui semblent avoir été percés afin de pourvoir à l'écoulement des liquides nés d'une matière en décomposition," Perrot et Chipiez, Histoire de l'Art, vol. VI, p. 953. For the use of pithoi as funerary urns, see Ath. Mitt. XVIII (1893), pp. 133 and 134.

[^7]:    ${ }^{1}$ Tsountas and Manatt, The Mycenaean Age, p. 163, Fig. 57.
    ${ }^{2}$ For characteristics of this epoch in Cyprus, see Myres and Richter, Catalogue of the Cyprus Museum, p. 21. Cf. Orsi on "A Mycenaeo-geometric transitional vase $"$ in the museum at Herakleion, A. J. A., Second Series, I, pp. 252 ff.

[^8]:    1 These are figured on Plate II, the second and third pieces from the left on the top row.

[^9]:    Saridamichaelakis, three vases which had been previously taken from the same tomb, and which were being used by these men to hold wine and oil.
    a. Hydria, 0.54 m . high (top broken); clay, light pinkish yellow ; decoration in black.
    b. Jug with double braided handle, 0.44 m . high ; clay, light pinkish yellow ; decoration in black.
    c. Jug, 0.37 m . high ; clay, light red, covered with lustrous black slip ; decorated with fish-scale pattern, painted in white. (Fig. 9.)

[^10]:    ${ }^{1}$ Brückner and Pernice, 'Ein Attischer Friedhof,' Ath. Mitth., XVIII (1893), pp. 73-191. The gold diadem is given on p. 109, Fig. 7. Compare also examples of gold repoussée work from the Dipylon, Collignon, Hist. de la Sculp. Gr., I, p. 87, Fig. 43, and from Eleusis, Collignon, Hist. de la Sculp. Gr., I, p. 88, Fig. 44, and examples of bronze repoussée work from Olympia, Collignon, Hist. de la Sculp. Gr., I, p. 89, Fig. 45 ; E. A. Gardner, Handb. of Gr. Sculp., I, p. 63, Fig. 2 (supposed to be Argive in origin).

