THE BURKITT EXCAVATIONS AT CHAMA; A PRELIMINARY REPORT.

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I. Introduction:

The purpose of this paper is to present the preliminary results of my research into the work of Robert Burkitt at the site of Chama, Alta Verapaza, Guatemala. The main focus of this report will be on three aspects of that work: the general background and goals of Burkitt's efforts at Chama; the techniques he employed in his excavations there; and, finally, a summary of his results. This latter section will concentrate on a description of the architectural remains, stratigraphy and various cultural deposits uncovered during the course of Burkitt's work. Unfortunately, a detailed treatment of the artifacts recovered by Burkitt is not presented at this time owing to the unfinished state of my research on this topic. No attempt at the chronological placement of this site will be attempted here for much the same reason. These subjects will be dealt with in future reports. For the moment, it was felt that some summary statement of what I had been able to glean from Burkitt's materials to date was necessary to serve as a basis for further work.

The site of Chama, as defined by Burkitt, consists of five single mounds and one mound group scattered over a gently rolling expanse of land on the east bank of the Rio Chixoy, the river which, here, acts as a boundary between the departments of Quiche to the west and Alta Verapaz to the east. This terrain, located c. 270 m. above sea level, is bounded on the west by the Rio Chixoy and on the north, south and east by high hills of the Sierra de Chama(?) range. In all, an area of roughly 4 km. east-west by 2.1 km. north-south is encompassed within these limits. In

addition to the Chixoy, this plain is watered by the Tsalbha, a west running stream that flows along the north margin of the area and empties into the Chixoy, and the Kux, a smaller stream which flows north-south across the middle of the Chama plain and empties into the Tsalbha. Two even smaller courses, unnamed by Burkitt, also flow into the Tsalbha; one running c. 400 m. FROM south to north and one extending approximately the same distance from northwest to southeast(see Figure 1). The area to the west of the Chixoy, in the department of Quiche, is evidently a continuation, topographically, of the Chama plain though, apparently, Robert Burkitt never examined this area.

The land of the plain is reported to have been fertile in the early part of the 20th century when Burkitt visited this site, and capable of supporting year-round corn plantings. The people living in the area at this time were Kekchi speakers, descendants, according to Burkitt, of immigrants, or immigrants themselves, from the areas around Coban and Carcha in the highlands of Alta Verapaz. In fact, during this paeriod, Chama seems to have been on the western edge of the distribution of this language. The land to the west of this zone, according to Burkitt, was largely uninhabited, until one reached the Ixil language area. Burkitt gives the population of the immediate Chama area as approximately 80-100 men, roughly 4/5 of which seem to have been debilitated at the time of his work, primarily from malaria. The modern settlement pattern seems to have been dispersed as no concentration of population is depicted on Burkitt's plan of the area and his several brief comments on the topic would seem to suggest such a pattern. I have found no mention, to date, as to who owned the

land on which Burkitt worked, though it does seem possible that all of the land of the plain was held by one owner.

The various components which comprise Burkitt's site of Chama were given six sequent letter designations by Burkitt. Mound A is located on the southern brow of a low, c. 10 m. high, north-south trending, relatively flat-topped hill in the approximate center of the plain near the confluence of the Tsalbha and the Kux (see Figure 1). Burkitt seems to feel that this hill was modified in prehistoric times to give it a more rectilinear outline, a subject which shall be dealt with below. Mound E is situated c. 130 m. south of,and on the same(east)side of the Kux as Mound A on another low hill. Burkitt seems unsure as to whether E is a flat-topped mound or a natural hill somehow modified ~~in prehistoric period~~ prehistorically. It was on mound E that the "estate house" was located, and it is here that Burkitt stayed during the course of his excavations. Mound B was, again, constructed on a low hill, this time in the northern portion of the plain, north of the Tsalbha river and c. 600-700 m. northwest of Mound A. The hill itself was c. 14-15 m. high, oriented roughly east-west and had a relatively flat top c. 80 m. long east-west by 42 m. wide north-south. Mound B was located at the eastern edge of this level summit.

Mound C (see Figure 2.) was situated c. 120 m. to the northwest of Mound B in the midst of relatively flat land. Burkitt had this structure cleared and a rough plan of it was drawn. This construction would seem to have consisted of a raised platform c. 3 m. high on the south and c. 4 m. high on the north, owing to an apparent

sloping of the ground surface on which it was built down from the south to the north. In form, this platform seems to have been a fairly regular quadrilateral measuring c. 63.5 m. east-west by c. 34 m. north-south with a rather broad, c. 38 m. wide, projection extending c. 13 m. to the north. Situated on the west, north and east edges of the summit of this platform were three low, approximately 1.5 m. high, structures. The west and east structures measured c. 23 m. north-south by 7.5 m. east-west, while the northern structure was c. 18 m. east-west by 7 m. north-south. Together these three constructions enclose a roughly rectangular space measuring c. 25 m. north-south by 38.5 m. east-west and open on the south and at the NW and NE corners. The exact nature of these structures is still unknown though, on the basis of Burkitt's north-south profile through the mound, they may have been low platforms. In terms of construction, Burkitt notes that the sides of the platform were built up of stone, very ruined, with an interior fill of sand and earth. Burkitt believed that this core of C was a natural hill that was later elarged, rectified and encased with stone, a difficult point to establish without some excavation .

Mound F was another hilltop mound like Mounds A, B and possibly E. Situated approximately 1.5 to 1.7 km. east of Mounds A and E and c. 2.1-2.3 km. southeast of Mound B, F is located at the eastern edge of the Chama plain on the east bank of the Tsalbha. Little is known of this mound, at present. Group D consisted of an undisclosed number of mounds located on the west bank of the Kux, c. 220-240 m. SW of Mound A. While Burkitt is not specific as to the details of this group, it seems highly possible that

this was the location excavated by Mary Butler in 194 and designated by her as Chama Group A. The fact that this is the only "group" of mounds noted for the Chama area by either researcher and that Mary Butler's excavations were focussed on a group and not a single structure is the principal reason for this supposition. Diesseldhorf is also reported to have worked at Chama in the late 19th or early 20th century, excavating in, possibly, this same Group D and in Mound E. While I have not focussed attention on Diesseldhorf's work at Chama, these excavations will have to form the subject of yet another future report.

In sum, the picture we get of Chama from Burkitt's descriptions is that of a rather disperse distribution of structures with two rather loosely defined groups; Mounds A, E, and D in the center of the plain and Mounds B and C to the north (see Figure). Mound F seems to be isolated in the far eastern portion of Chama. In all cases these structures, or group of structures, are located within 160 m. of a continuously flowing river course, the Tsalbha for Mounds B, C, and F and the Kux for Mounds A and E and Group D. The paucity of structural remains away from these courses may be due, in part, to the nature of Burkitt's surveying, though this is not certain owing to the lack of information presently available detailing how Burkitt located the structures listed and whether he actively searched for others. Burkitt does note, however, that much of the land of the Chama plain contained pottery sherds which were frequently turned up in some numbers during planting activities.

The principal focus of Burkitt's own work was Mounds A and B. It is difficult, at this time, for me to provide exact dates for the duration of these efforts. Based on correspondence researched to date, it would seem that Burkitt had commenced excavations at Chama at least by late April or early May of 1916. That his work continued through September first of that year seems fairly secure, though how long it progressed beyond that date is still in doubt. Burkitt definitely seems to have ceased operations at Chama prior to September of 1917, by which time he had sent off his recovered materials and filed what appears to have been his final report with the University Museum of the University of Pennsylvania, for whom he was working at the time. Whether work was continuous or sporadic throughout this period of time and whether Burkitt was present at all stages of the excavations is also not known. The stated goals of this research seem, primarily, to have been to recover as many fine, decorated pottery vessels and other objects of high quality craftsmanship as possible to be sent to the above mentioned museum. Burkitt's failure to recover these items in sufficent amounts evidently led to his curtailing operations at Chama prior to his excavation of Mounds C and F which he had originally planned to accomplish. While the attempt to make,"a great haul", of material seems to have formed the principal objective of his work, Burkitt's actions seem to betray a certain interest in understanding the architectural nature of the structures he excavated, as well.

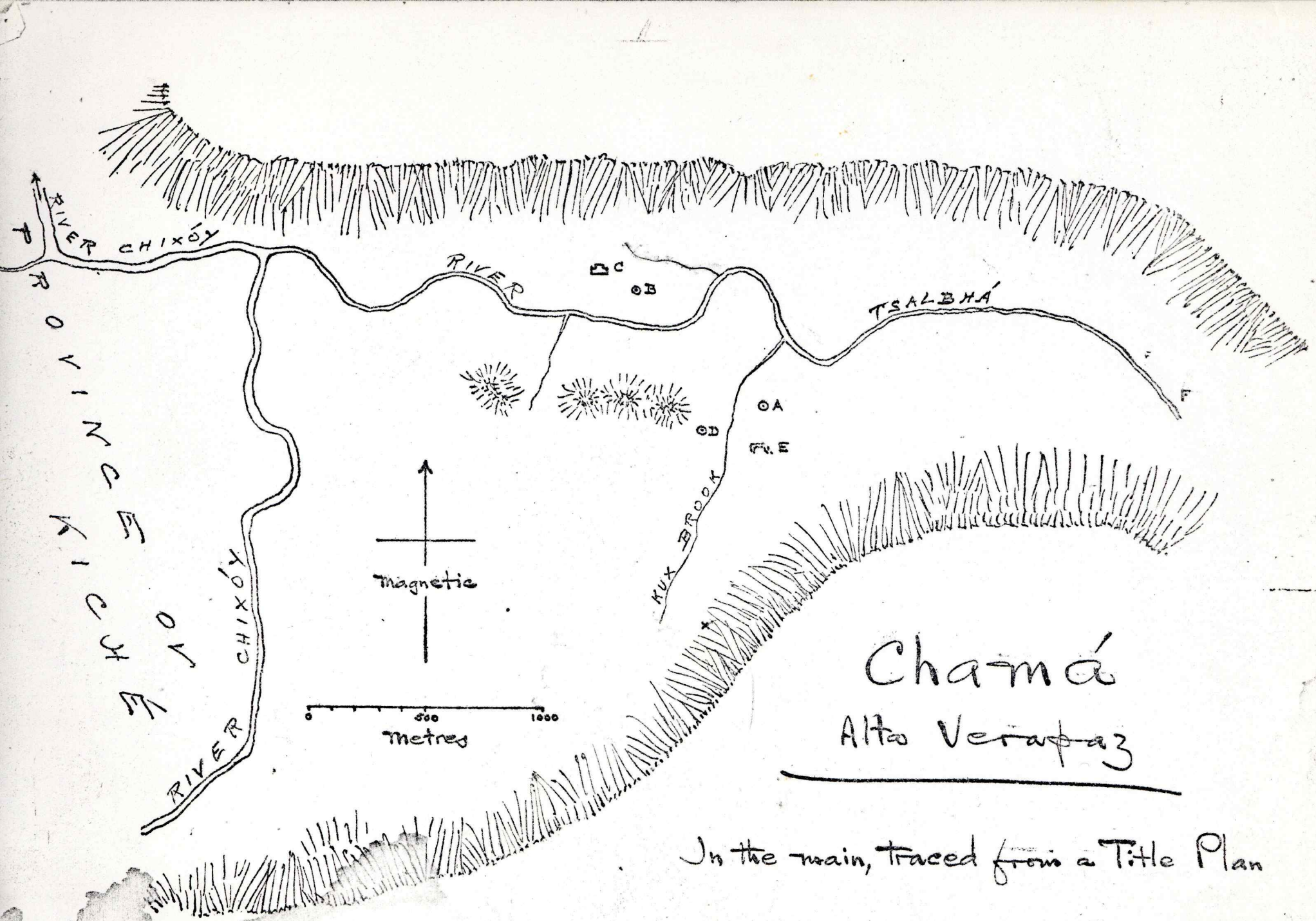


Figure 1.
Map of the Chama Plain.
(Burkitt,n.d.).
Mounds represented by letter designations.

II. Excavations in Mound A: (Figures 3 and 4).

Mound A, the first of the two structures dug by Burkitt, consisted of a roughly east-west oriented rectangluar structure measuring c. 12 m. east-west by 8.6m. north-south, located on a low hill in the Chama plain (see Figure 3). The hill itself is composed of "pumice stone sand" on its southern slopes while, to the north, at least on the summit, "earth" seems to be the predominant component. On the basis of Burkitt's drawings, the base of the south face of this structure is located c. 0.50 m. below the base of the northern face (see Figure 3). The slope and height of the structure on the south, therefore, is greater than on the north. No such comparable variation is noted for the east and west faces. Extending back from the northern end of Mound A is the relatively level surface of the hill's summit. The structure stands approximately 0.70 m. above the level of this latter surface.

Before beginning the description of the excavations in this structure in some detail one point must be noted. In order to facilitate this description all features will be given a feature number in a sequence which is unique for this structure. The same proceedure will be followed for Mound B but the numbers given there will not form a continuation of the list begun here.

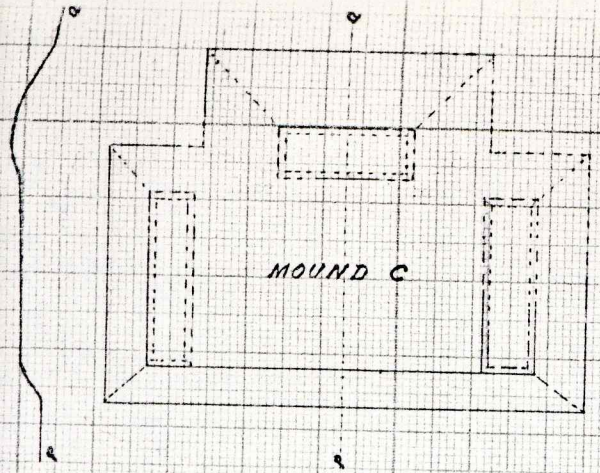
Excavation in this structure appears to have been carried out by 12-20 men, probably no more than 15, each equipped with a six inch hoe on a one foot handle and one trowel. Despite the sifting of much of the earth removed, excavation here was still relatively rapid, with one man removing approximately 1/2 m^3 of

Figure 2
(Burkitt, n.d.)

THE HIL OV MOUND B

AND THE APROXIMAT POZITION OV

MOUND C



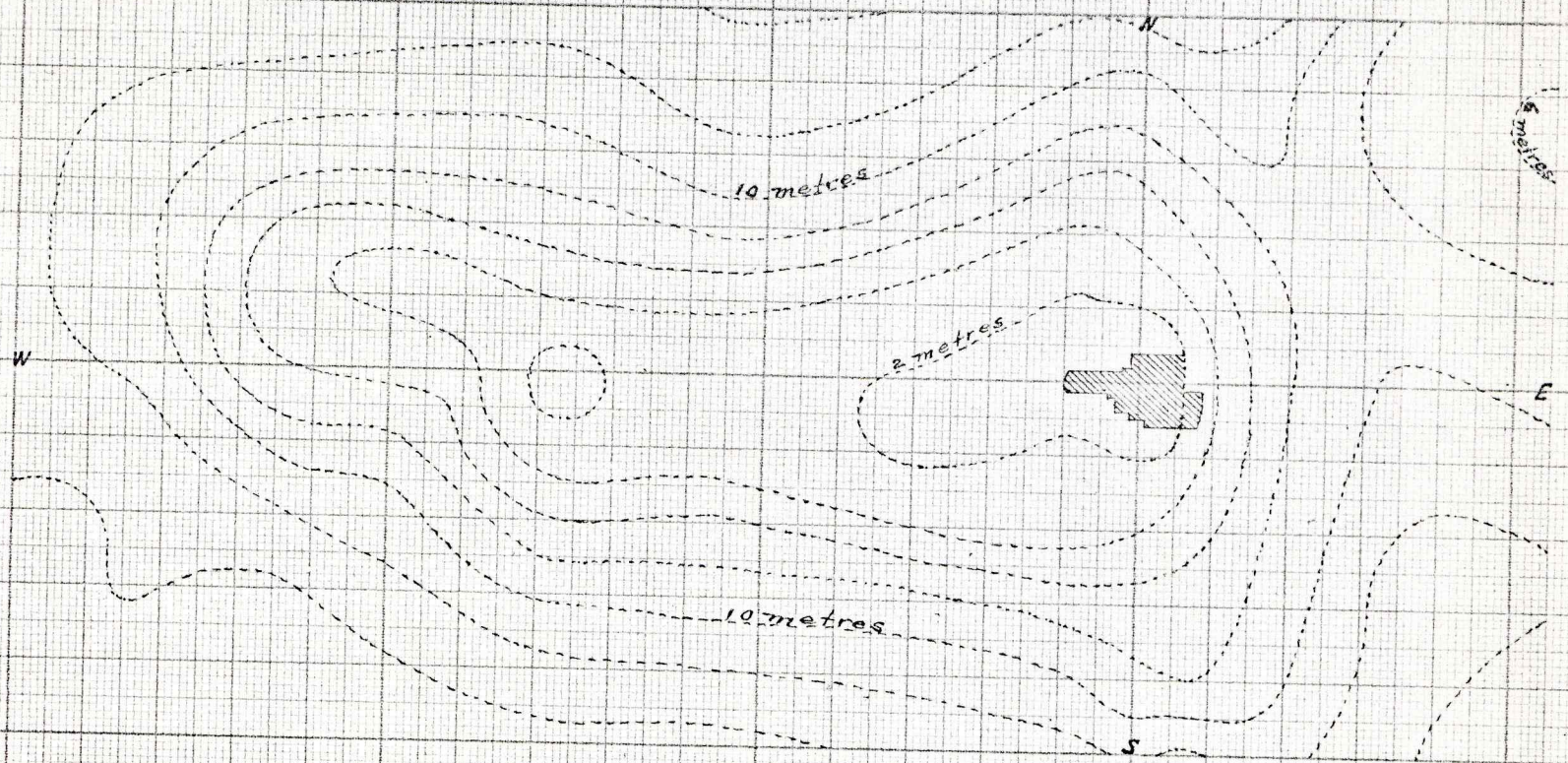
0 5 10 20 30 40 50
METRES

MAGNETIC

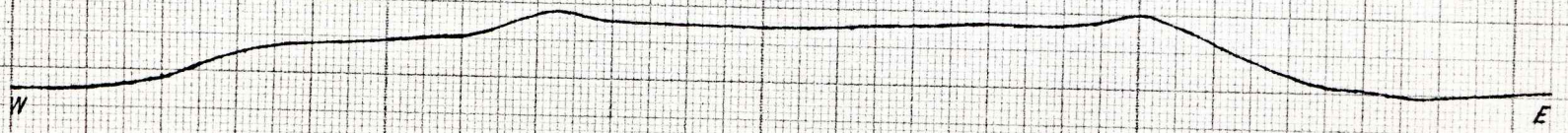
The highest point ov the hil, and the top ov mound B, iz in the intersection ov the lines N S and E W.

The level lines ar taken at intervals ov two metres, starting from the top.

Excavation in mound B.

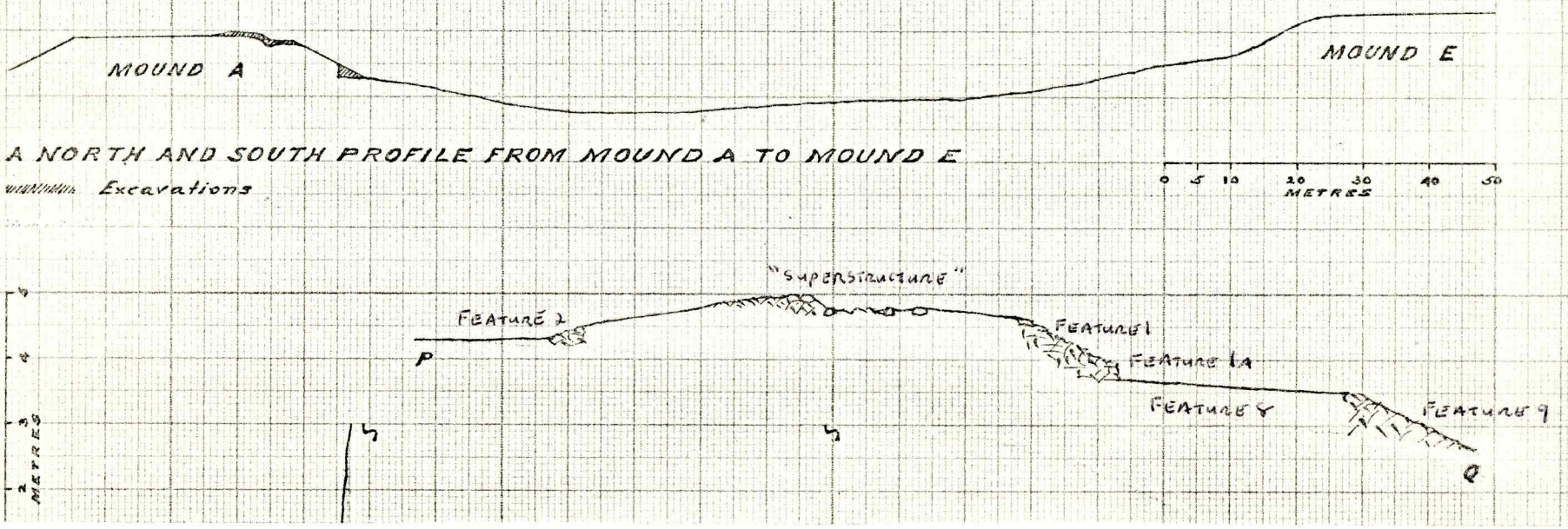


PROFILE OV THE HIL ON THE LINE EW



Level ov the Tsalohd river

Figure 4.
(1:100 scale north-south section of Mound A and
the 1:1000 scale section between Mounds A and E)



THE TOP OV MOUND A

Showing the remains ov stone work
Depths ov digging
And the aproximat situation ov finds

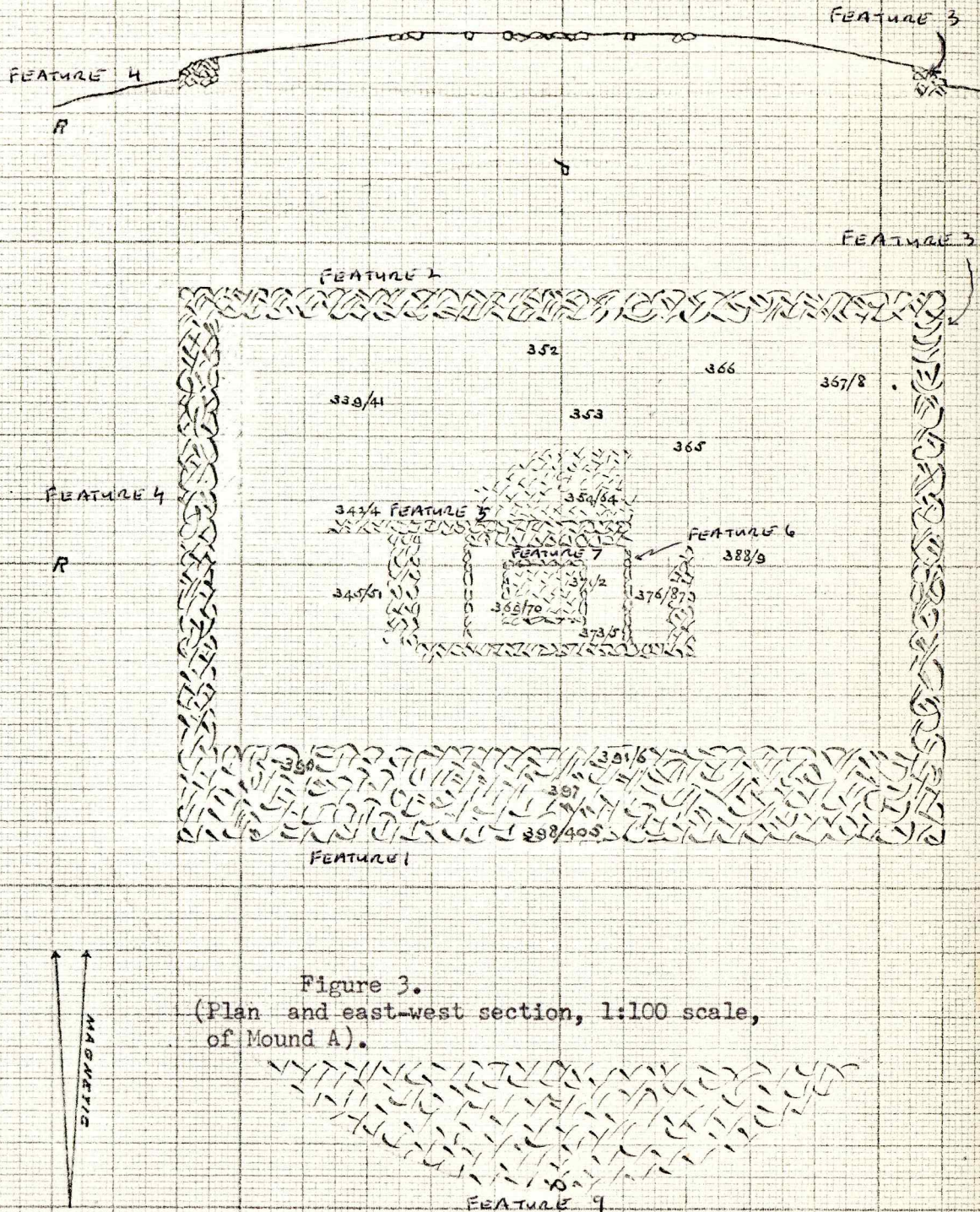


Figure 3.
(Plan and east-west section, 1:100 scale, of Mound A).

earth in roughly half an hour. Recording consisted, in addition to notes and photographs, of the drawing of a 1:100 scale plan of the structure showing the general configuration of the architectural features exposed by excavation and two 1:100 scale sections through the structure along its north-south and east-west axes (see Figures 3 and 4). A 1:1000 scale profile was also drawn running north-south between Mounds A and E showing their general relationship (see Figure 4).

In terms of actual excavation, the first step was the removal of the topsoil, though whether over the entire mound or just in the areas of the initial excavations is unknown. After this, the mound was trenched along its north-south and east-west mid-lines. These trenches were dug down until what Burkitt judged was the natural, undisturbed strata of the hill on which Mound A was built was reached. After this, as it appeared that the distribution of materials was not restricted to the centerlines, he excavated out the remaining quarters that were still standing, again down to the level of the 'natural hill'. The end result of this process was the complete removal of the mound. In addition to this principal focus of excavation, Burkitt also openned up a smaller excavation at the southern base of the hill on which A was constructed. This operation was, apparently, ~~along~~ located on the north-south center-line of Mound A and seems to have benn c. 4 by 4 m. in size. Here, again, Burkitt claims to have dug down to the level of ~~the level~~ of the undisturbed hill slope, though, as in the upper excavations, the exact depth of this level below any datum or, even, ground surface is not given.

The materials recovered from the excavations in Mound A

itself were located in an approximate way on the 1:100 scale plan of the structure but not on the section of the same scale, the depths of this material being given only very roughly. The excavations at the southern foot of the hill of Mound A are not shown on either the plan or the detailed section, so that the little material recovered in this operation is not located graphically in even a general way. The result would seem to be, at this point, that while excavations were thorough, the provenience data for the recovered items is scanty.

The results of excavations, with respect to a determination of the architectural nature of Mound A, while somewhat equivocal, still provides us with some of the best architectural data we presently have for Chama. Before proceeding to the specific description of the results of the Mound A work, some of Burkitt's general comments on the nature of stone construction at both Mounds A and B must be taken into account. He notes that the principal material used in all this work is limestone, usually fairly small, there seldom being a stone that,"one man can't easily handle." There was,evidently, no cut stone in either of these mounds, but, rather, advantage seems to have been taken of naturally flat and straight edges which received little or no modification before being put to use. Only one example of the use of mortar was recorded, and that from the the excavation at the southern base of the hill of Mound A. Otherwise, no mortar was recovered and sand and earth appear to have filled the intertices between the laid stones. While Burkitt rarely deals with this topic relative to specific structures, we may tentatively assume that this method of construction was invariably the case in both A and B.

In essence, Mound A appears to have been an earth and sand-filled mound bounded on all four sides by some form of stone construction, the nature of which seems to be clearest on the south. On this side of Mound A the stone enclosure seems to form a fairly uniform downward slope on its outer face extending from approximately the southern edge of the mound's summit downward for c. 1.7 m. This sloping surface terminates at the top of a low, c. 0.30 m. high, wall of stones, preserved to three courses high, which serves to mark the southern limit of this construction. The preservation of this lower wall, when compared to other stone constructions found in this structure, is attributed by Burkitt to its having been buried in the topsoil. (For the purposes of this discussion, the southern stone construction, in general, is designated Feature 1, the low southern wall which marks its termination, Feature 1a). No clear indication is given as to the extent of this 0.30 m. high wall (Feature 1a), though we may suppose that it continued for a sufficient horizontal distance for Burkitt to have believed it to be a feature associated with the whole of the southern side of Mound A and not just restricted to its center-line where the north-south detailed section shows it to exist. The horizontal width of Feature 1 is c. 1.5 m. and it stands c. 1.0 m. at its summit above the the level of the hill to the south. The stone constructions forming the north, east and western flanks of the structure (Features 2, 3 and 4 respectively) are much narrower, c. 0.60-0.70 m. on the west and c. 0.50 m. on the north and east, and none of them would seem to show any signs of formal construction similar to Feature 1a. Features 3 and 4 stand c. 0.60 m. high, while feature 2 stands to

a height of c. 0.30 m. Features 2, 3 and 4, in section, seem to form rather uneven surfaces sloping at low angles down to the level of the surrounding hill. They also appear to have relatively level bases and vetical surfaces facing into the interior of the mound, in contrast to their southern counterpart (see below).

I have used the phrase "stone construction" here to describe Features 1-4 because of the problemmatic nature of these units. Burkitt seems to view all of them as "walls" but, with the exception of Feature 1a, neither the sections, plan nor notes record any definite evidence of formally coursed construction associated with any of these features. While it would definitely appear that these constructions surrounding Mound A on four sides are not natural, (stone does not appear to be a common component of either the fill of mound A or its supporting hill and what stones do appear seem largely limited to these encircling constructions), it is still very difficult to determine their exact nature. As a result, while it may well be that the stone work forming the boundaries of Mound A represents the remains some form of fill-retaining wall, I felt it was better to restrict the term "wall" to those instances of coursed stone construction possessing some lateral extent.

What these features rested on is not known exactly. At present, our best evidence, again, comes from the southern stone construction (Feature 1). Here, according to Burkitt's description, Feature 1a appears to ~~rest~~ have been built on the same type of sand containing some cultural remains which characterizes the bulk of the fill of this mound. The level which Burkitt recognizes as representing the "undisturbed stratified sand of the hill" is still

approximately 0.65-0.75 m. below the base of that wall. Whether the stratigraphy or associated material remains would seem to suggest contemporaneity between the sand underlying Feature 1a and the sand fill of the mound is presently unknown. It is interesting to note, however, in the north-south section of Mound A that the base of Feature 1, beginning c. 0.30 m. north of the front of Feature 1a, seems to slant upward towards the summit of A at roughly the same angle as its exterior surface. In short, in contrast to the stone constructions on the other four sides of Mound A, Feature 1 seems to be definitely resting in or riding over the interior fill of this structure. The possible significance of this feature in terms of the sequence of construction of this structure will be discussed later in the course of this paper. Information on the east, north and west stone constructions is very scarce and I have no certain idea at this time what sort of surface they were constructed on.

On the summit of Mound A, roughly in the middle of that structure, Burkitt uncovered the remains of what seems to have been a superstructure with its long axis oriented almost due east-west. The evidence for this feature consists of lines of stone, found just below the surface, standing to only one stone high. In general, these lines seem to form an overall pattern consisting of three different-sized, stone-bounded rectangles, arranged concentrically with the smallest at the center. The thickest stone lines, measuring c. 0.40-0.50 m. (roughly three to two stones width), form the eastern and western ends of the outer larger rectangle, while the north and south walls of that "structure" are c. 0.20 m. thick (one stone's width). One exception to this

is the northern line of stones where it also forms the northern limit of the next, smaller, enclosed rectangle. (Figure 3). Here the width expands to two stones, c. 0.40 m., for a distance of roughly 25 m. It should also be noted that this northern line, at least where it appears in the north-south detailed section, is situated c. 0.20 m. higher than all the other lines which form part of this "superstructure". At least in this location, it seems to have been underlain, to a depth of c. 0.20m., and backed to the north to a distance of c. 1.1 m., by some form of stone construction. The thickness of this construction is variable, being deepest under the stones of the northern line, and thinning out to the north, away from these stones. At its thickest point, the base of this underlying construction seems to be at approximately the same level as the bases of the other stone lines. Whether this raised feature continues east and west of its appearance in the section is unknown, as is its function. The interior space enclosed by these stone lines is roughly 3.9 m. east-west by 1.7 m. north-south. (This rectangle, as a whole, is designated Feature 5.).

The next stone-bordered rectangle is located within the first, c. 0.70 m. in from both the east and west walls of Feature 5, and it shares the north and south walls of the larger feature. The east and west walls are c. 0.10 m. thick (one stone's width) and the interior space enclosed is roughly 2.4 m. east-west by 1.5 m. north-south. Finally, located within this second enclosure (designated here as Feature 6) is the third and smallest rectangle (Feature 7). The area enclosed here is approximately 0.80 m. north-south by 1.1 m. east-west. The surface of this feature is

apparently covered with a tightly packed, relatively level "pavement" of stones, one stone, c. 0.10-0.15 m., thick. The areas between the aforementioned stone lines seem to lack such a pavement and appear to be open earth with no flooring recorded. The stones used in all the above-noted lines are, roughly, 0.10-0.20 m. long by 0.10 m. thick. The only possible "entrance" which Burkitt indicates on his plan is at the northeast corner of the outermost, larger rectangle (Feature 5). This gap measures c. 0.60 m. wide east-west. There seems to be no other such feature in the above-noted lines. The discussion of this feature is reserved for the conclusions section of this paper.

The fill enclosed on all sides by the stone constructions discussed above (Features 1-4) and topped by the presumed "superstructure" was composed of sand and earth with some occassional stones. The sand and earth apparently had mutually exclusive distributions, with the earth being found along the north side of the structure and in its northeast and northwest corners while sand predominated over the rest of the mound's interior and seems to have run out for some distance under, at least, the southern edge of the mound. Burkitt reports that the fill also included "astonishing amounts" of broken pottery, mostly from coarse wares, uniformly distributed from the base of the mound to the summit. He even went so far as to calculate the average amount of broken ceramics recovered per unit of excavated fill, arriving at a figure of 13 lbs. or 6 kilos of cleaned and dried pottery/$m.^3$. Unfortunately, given Burkitt's concern with whole vessels, very few of these sherds were saved, most being discarded at the site. Some complete vessels were recovered

from this context, as were artifacts of obsidian and flint. Very little bone, however, was recovered in the excavations at Mound A.

Extending south from Feature 1, for c. 3.45 m. was a relatively level (rises to the north c. 0.20 m. over this distance) expanse of sand. This area appears to represent the results of a cutting-and-levelling modification of the hillslope on the south side of A as the resulting profile is now totally out of keeping with the natural slope of the hill noted to the east, north and south of that structure. Further south, beyond this flattened area (designated Feature 8) Burkitt notes that the hill on which A sits slopes down at a rather steep angle for c. 10 m. and is faced over this distance with a rough veneer of stone. While he records that much of this construction is in ruins, he claims that some form of "stair construction" was still visible. A similar type of construction is supposed to characterize the north slope of this hill as well but, apparently, it was not found on the east and west rises. While Burkitt did not excavate extensively into these "faced hillslopes" (the southern one of which is designated Feature 9 and the northern, Feature 10), he did open up what seems to have been a 4 x 4 m. excavation at the foot of the south slope. He claims that this excavation uncovered a series of "stairs" each c. 0.60 m. high leading down to near the base of the hill where the "bottom of the stair work" rests immediately over the "undisturbed, stratified sand" of the hill. He also states that he found a "yellow clay" level on which the "sand hill" supporting Mound A rests, though how this level relates to the noted construction, how extensive it is and so forth, is not known. Unfortunately no

drawings of this work have been found, nor are any mentioned, and, as I have not yet been able to locate any of the photographs relevant to Burkitt's Chama work, little more can be said at this point.

In short, it seems at present that Mound A may be described as an earth and sand filled mound retained on all four sides by some form of stone enclosure, and surmounted by a rather small but complex superstructure. To the east, north and west this structure seems to face onto the more or less natural contours of the hill which supports it, while to the south it is fronted by a relatively level expanse of, possibly, flattened (modified?) hillslope which then gives way to a seemingly terraced construction on the hill's south slope. A similar construction may characterize the north slope of the hill as well.

The sequence of of construction here is difficult to evaluate. At present, there would seem to be little basis for assuming that Mound A was not a single component construction built up, more or less, at one time. A very tentative constructional sequence might be proposed here, subject to modification as research progresses. First, a level of sandy fill may have been laid to serve as a base for the sothern stone ~~construction~~ (Feature 1A). Second, the four stone constructions (Features 1-4) were built ~~including Feature 1a~~, as retaining walls enclosing a roughly rectangular space. Third, the sand and earth fill was deposited to form a very gradually sloping surface rising up to a wide (c. 5 m. wide north-south by 7 m. long east-west) relatively flat summit. Fourth, perhaps partly to reinforce the slightly steeper slope of the mound on the south (because of the natural slope of the ground, the south side of the mound was lower than the north

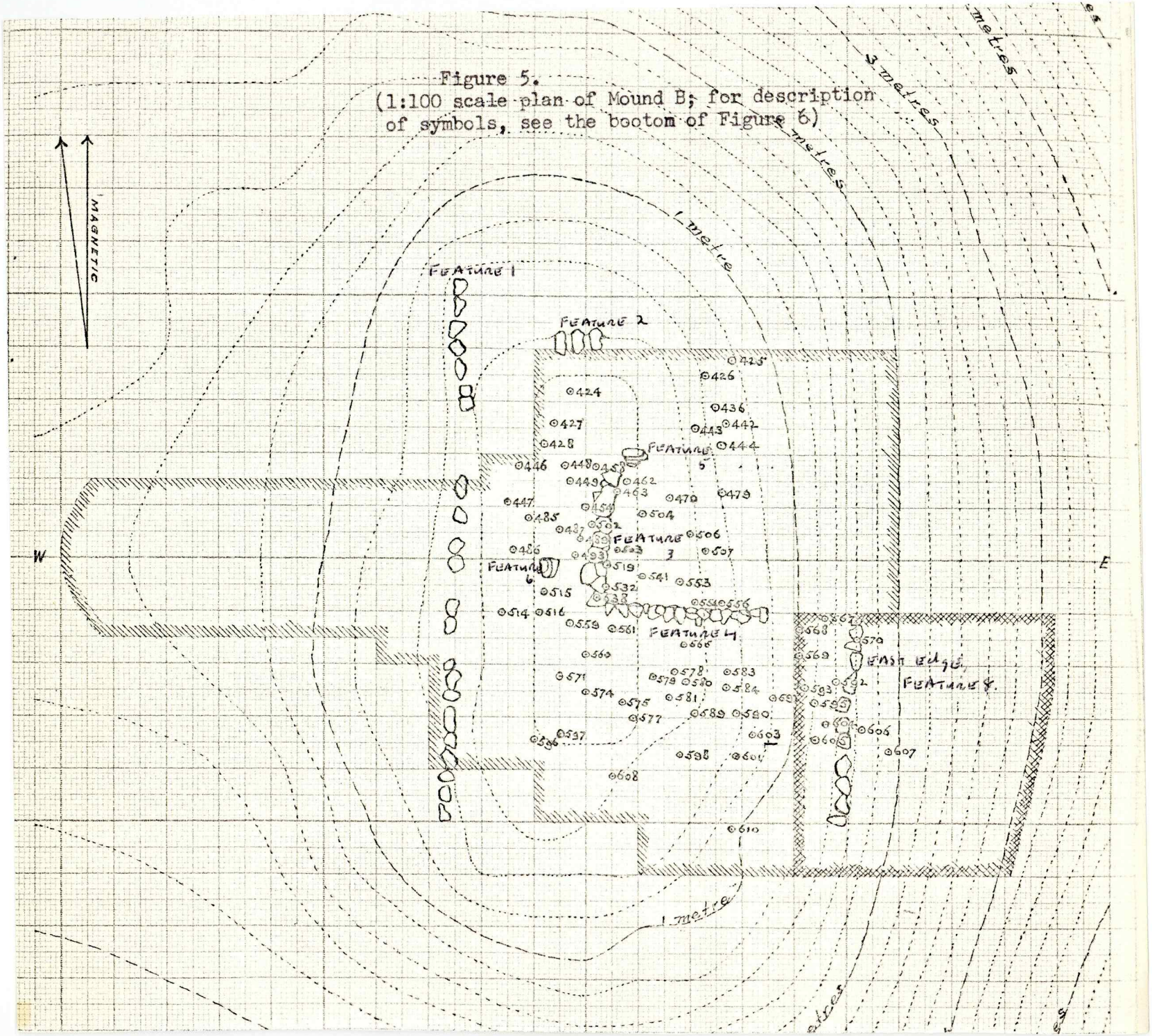
a condition which would have been exacerbated by the levelling of the upper portion of the southern slope as noted above), and partly for aesthetic reasons, the south slope of sand was overlain by a c. 0.35-0.40 m. thick deposit of limestone rocks extending up slope from south to north from Feature 1a. Finally, the "superstructure", if such it was, might have been built on the summit. The levelling of the hillslope to the south, the facing of the north and south slopes with stone and the construction of "stairs" at the base of the south slope ~~would~~ might, presumably, have gone on concurrently with the construction of Mound A, especially since the base of the low southern wall (Feature 1a) seems to rest on the aforementioned flattened surface. Further examination of the materials located in this mound may shed more light on the problem of construction phases, though the apparent lack of in situ deposits, e.g. burials, caches and so forth, and the lack of accurate depth measurements of located materials makes such a possibility rather slight.

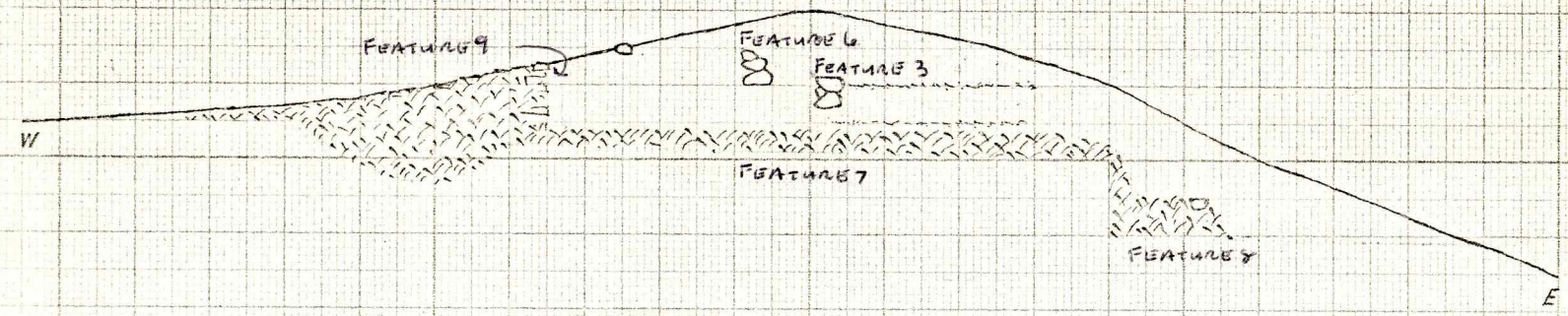
III. Excavations in Mound B: (Figures 5 and 6)

Mound B is a roughly oval-shaped earthen mound located on the eastern brow of a low hill composed of earth and stone; this hill is oriented roughly north-south and measures c. 18 m. north-south by 14 m. east-west at maximum. The mound stands roughly 1.45 m. above the level of the hilltop to the west. Unlike Mound A, it does not seem to possess any definite lines of stonework marking its limits and its precise boundaries and difficult to locate as they seem to merge imperceptibly into the natural contours of the supporting hill. The summit of this structure is reported to have been very level and nearly rectangular in shape with dimensions of c. 7 m. north-south by 2 m. east-west. Burkitt also notes that this mound appears to have been looted in the past, though the extent of this previous excavation and its probable author(s) are not known.

The number of men involved, the types of tools used and the general excavation strategy of axial trenching and sifting of excavated fill would seem to have been roughly the same for Mound B as they were for Mound A. The time taken to excavate this structure seems to have been somewhat longer, however, with c. 1/2 $m.^3$ being about all that one man could excavate and sift in a day. Several rather interesting modifications were introduced in the Mound B excavations which must be briefly dealt with here. In terms of recording, Burkitt in addition to his notes and photographs, drew a 1:100 scale plan of the excavations, a section at the same scale along the approximate east-west center-line of the structure and a 1:1000 scale general plan showing the relative location of the excavations to the surrounding topography. Not only were architectural features and the limits of excavation noted

Figure 5.
(1:100 scale plan of Mound B; for description of symbols, see the bootom of Figure 6)





THE PLAN shows the lines of surface level, the area dug, and the situation of certain finds. THE TOP POINT of the mound was in the intersection of the lines NS and EW. THE LEVEL LINES are taken at intervals of two decimetres starting from that top point. The limit of the upper digging, that is, the digging to a depth of two metres, or less, below the top. The limit of deeper digging, digging to three metres. Remains of wall, or of laid stones. ⊙424 The point, in plan, of what is catalogd as number 424; and so on: see the catalog, under 424/611.

THE SECTION is a section on the line EW, combined with the nearest parallel section of the deep digging; and shows the terraced outline of the underlying stone-pack. Packt stone, with earth between the stones.

Earth with more or less stone in it, but not packt stone.

Bones, forming a distinct layer.

Figure 6.
(east-west section, 1:100 scale,
of Mound B.)

on the plan but, also, the relatively exact locations of most of the larger items that were recovered and subsequently forwarded to the University Museum, in Philadelphia. All locations were measured vertically and in at least two horizontal directions, e.g. north and west, south and east, etc..., from an arbitrary datum point established at, more or less, the exact center of the structure's summit. All these measurements were made to the center of the object located and given in meters, rounded to the nearest tenth of a meter. Those items considered sufficently important to send on to the Museum and not shown on the plan have their positions given relative to those objects which were plotted. This rather precise system for the location of the more impressive objects encountered carried over to other domains of artifacts, though for a different, rather specialized purpose.

Burkitt attempted to save everything excavated, in particular, all pottery sherds. These sherds were placed in receptacles and the provenience noted on a ticket attached to the container and their location plotted on a plan of the excavations (apparently not preserved). To further facilitate this system of location and to ensure that the proveniences of the different containers did not overlap, Burkitt divided the entire area to be excavated into cubic meters and all the sherds drawn from one such unit were kept seperate from those derived from other units. The workmen were responsible for keeping track of the cubic meters though, at times, these units were staked out on the surface and each man assigned to one such unit. As a result, the digging, "tended to take the shape of shelves," each "shelf" c. 1 m. in width and as high as the depth of the excavation. After removal,

certain containers were washed, dried and examined for fragments of nearly complete vessels known to come from the area of the container by the method described earlier. Those sherds which were of no use to this purpose or those receptacles which were not likely to produce such remains were thrown away, though some were first weighed to get ~~some~~ an idea of the amount of sherds/cubic meter of excavated area. The purpose of this rather elaborate system, therefore, was to facilitate the location of pieces of ceramic vessels, all other fragments being thrown away as useless. It seems to me that the above system, with its concern for the creation of discrete units of excavated area which can be precisely located, approaches, rather remarkably given the period of work, the modern system of location of materials by "lots" used in many Mesoamerican sites today. The principal difference would seem to be that, at the time of his work at Chama, Burkitt did not possess a framework that would give any meaning to isolated sherds; whole vessels were his focus, the only ceramic items which carried any meaning to him.

More specifically, Burkitt began excavations here with an axial trench c. 3 m. wide north-south, extending in from what Burkitt believed was the front of the structure (the west) c. 6 m. into the mound itself. Apparently, because of a failure to find any of the types of remains which primarily interested him, he switched operations to the east side of the structure, and began a trench on, presumably, the center-line of that slope, at a level of c. 1.0 m. below the summit, c. 4 m. east of the mound's center datum. Because of the large amounts of bone found soon after openning this excavation, the trench was extended c. 2 m. further

downslope to a level c. 2.0 m. below the summit. From these initial operations, the excavations were expanded north, south, east and west following out various architectural features, attempting to define the limits of skeletal remains and to increase th sample of complete vessels and other remains. By the time operations were terminated here, the original east and west trenches had been joined. The excavations in their final form consisted of a large central square measuring c. 7 m. east-west by 8-10 m. north-south extending over the entire middle of the mound with a c. 3-3.5 m. wide north-south by 9 m. long east-west trench extending out to the west. A pit, c. 4 m. east-west by 5 m. north-south, overlapping with and situated at the SE corner of the large center square excavation marked the focus of Burkitt's deepest digging, reaching a depth of c. 3 m. below the surface of the summit (datum). All excavations, at this time, were interconnected with no baulks left standing. The depth of these excavations below datum varied from the deepest in the aforementioned southeast corner pit, c. 3 m., to the shallowest, c. 1.5 m. B.D. in the far westrn end of the western trench. This, of course, does not indicate depths below surface. In this case, the deepest work would be at the mound's center, c. 1.9 m., and the shallowest in the west edge of the west trench, c. 0.10 m.

The results of the excavations at Mound B may be summarised as follows. On the west face of the structure, c. 1.5 m. downslope from the west edge of the summit, Burkitt encountered at the surface a broken line of unfaced stones trending roughly north-south. The line extended for approximately 10.3 m. and had no depth, being only one stone, c. 0.15 m., thick. While this line

is discontinuous, with most of the gaps falling toward the middle of its extent, no recognizable pattern could be recognized in these omissions. Another line of stones limited to the surface, this time extending for only c. 0.90 m. (3 stones) was noted trending east-west just (downslope of) below the northern edge of the summit. How this line might have related to the previously noted north-south trending line is unknown as a gap of c. 1.7 m. from east to west seperates them presently. The rocks in both lines are presumably limestones, unfaced and average roughly 0.30-0.50 m. long by 0.20-0.30 m. wide. The only evidence at this time which indicates that these lines might have had some validity as cultural features and might have been part of some larger construction is the fact that the whole surface of the mound down into the topsoil was covered with stones of about the same dimensions. This might suggest that some form of structure associated with the terminal use of the mound might have existed which, aside from the above-mentioned stone lines, was largely destroyed by the time of Burkitt's work. (The north-south trending line is designated Feature 1 of Mound B, the east-west line, Feature 2).

The next architectural feature recorded consisted of two stone walls, one trending northeast-southwest (Feature 3) and the other southeast-northwest (Feature 4), meeting at an approximate right angle beneath the summit of Mound B. Feature 3 was located c. 0.90 m. below datum and stood to a preserved height of, approximately, 0.40 m. (2 courses). The length of this wall was approximately 2.45 m., as recorded by Burkitt, with its width between c. 0.35-0.50 m. The southeast-northwest trending wall

(Feature 4) ran for a distance of c. 3.1 m. and had a width of c. 0.30-0.35 m. The preserved height of this feature is not given, either in the notes or in the section, though Burkitt does record that it stood higher than its northeast-southwest trending counterpart. Burkitt describes both walls as having a "loose" form of construction, presumably indicating that the stones were dry-laid without mortar and that they were not evenly cut so that the interfaces between the rocks were not straight and flat. He also notes that neither wall runs exactly straight. The stones of these walls seem to have measured about 0.30-0.60 m. long by 0.20-0.40 m. wide and had a "roughly faced"side which was oriented in toward the contained right angle formed by the two features. If, indeed, these constructions formed the west and south walls of a buried construction, as the plan seems to indicate, there would seem to be very little evidence for the existence of the corresponding north and east walls. One possibility is a pile of five to six stones (actual height unknown at present) situated just east of the north end of Feature 3. (FEATURE 5.) While Burkitt does not state whether this "pile" rests at the same depth as the bases of the other walls, he does seem to feel that ~~this~~ it could represent the north wall of this structure. If so, and assuming that the east end of Feature 4 is at approximately the southeast corner of the original structure, this would give an enclosed area of c. 7.595 $m.^2$. Throughout this space Burkitt notes that the earth was "full of stones" of the "usual building size" with few of them found as much as 1.0-0.75 m. long. No sign of a floor was recorded and the two walls seem to have "rested on earth".

A possible architectural feature (Feature 6), consisting of an isolated pile of stones c. 0.50 m. high (3 stones high), was located c. 0.55 m. west of the northeast-southwest trending wall. Situated in earth with its base c. 0.30 m. above that of the two walls discussed above, the relationship of this feature to any of the others locate in this mound is presently unknown. A "smaller pile" located close above this one and to the west was also noted by Burkitt, though not recorded beyond this brief description.

Located c. 0.30 m. below the base of Features 3 and 4, Burkitt located what seems to have been a rough stone surface extending c. 7.5 m. east-west and north-south at least to the limits of excavation, approximately 10 m. This surface consisted of "loosely thrown together" rocks, presumably limestone, of varying sizes packed around with stiff earth. Following this pavement (Feature 7) to the east Burkitt found that its relatively level surface gave way to a downward sloping face at its east margin. This latter surface was canted rather steeply, dropping c. 1.2 m. over a horizontal distance of c. 0.35 m. and led to yet another relatively level "pavement"(Feature 8). Burkitt notes that the slope was in a particularly "ruinous state" and, for that reason, the east edge of Feature 7 and the foot of the slope where it joins Feature 8 are not distinct. This second level is much narrower than the first, c. 1.05 m. east-west, and its total length is, again, unknown, as it seems to continue both north and south of the limits of the deep excavation, c. 5 m., albeit in a more "ruined" state to the south. The east edge of ~~this~~ feature 8 is bounded by a line of stones,"bigger than the average of the pack(surface)", laid along and incorporated into the edge of this "pavement".

The stones of this border seem to have been only roughly faced and to have measured c. 0.20-0.40 m. long by 0.15-0.30 m. wide. The line they form is discontinuous, stopping c. 0.90 m. north of the south edge of the excavations, though the surface of Feature 8 appears to continue beyond these excavation limits. The method of construction here seems similar to that noted for the upper pavement (Feature 7), irregularly shaped rocks roughly laid in a stiff earth matrix. Immediately east of the bordering line of stones, Feature 8 gives way to another rather steeply sloping surface which was followed down for a distance of no more than c. 0.50 m. before excavations ceased.

The west west margin of Feature 7 is marked by a vertical rise, c. 0.90 m. high at present, and constructed of the same materials and in the same way already noted for the previous two features. The original height of this rise (Feature 9) is unknown as it is, presently, at this point that the ground surface is reached. The possibility of such a truncation seems supported by the fact that Burkitt, in his initial western excavation, found what seems to have been the fill backing Feature 9. He did not, however, encounter any identifiable surface in this work, indicating, perhaps, that Feature 9 might once have been the east wall of some form of structure whose original upper surface had been removed and only the underlying fill left in place.

While Burkitt never excavated through Features 7-9 to determine their total thickness it seems that he did, at several points, penetrate into what would have been their construction fill, (at a maximum depth of c. 1.3 m. below ground surface immediately west of Feature 9; to a depth of c. 0.20-0.40 m. into Feature 7;

and c. 0.50 m. into Feature 8). In all of these cases he apparently found the same mixture of earth and stone noted on the surfaces. No evidence of any attempt to smooth or further level any of these features, e.g. through plastering, was recorded.

In terms of EARTH stratigraphy, Mound B is generally described as an earth mound containing some scattered stones and only a few pockets of sand. Burkitt also notes that, in general, the further below the surface of the mound, the "stiffer and stickier" the earth becomes. This would, in particular, seem to be the case within the c. 0.30 m. separating Features 3 and 4 from Feature 7. More specifically, Burkitt noted that, extending up from the surface of Feature 7, the broad, low pavement, were 4 horizontal levels of reddish soil seperated from eachother horizontally by 5 layers of dark brown earth. The vertical sequence of these levels was such that the uppermost layer, which seems to include the topsoil, was of dark earth, followed below by a level of reddish soil and so on until at some distance just above Feature 7 a red level gives way to one of dark brown. Cultural material appears to have been found in both these types of levels in approximately equal densities, though skeletal materials and complete ceramic vessels appear not to have been found associated with the red (see below). The thicknesses of these units varied, their dividing lines were rarely sharp and, at some points, the red layers were, "broken up and confused". Still, on the average, THE RED LEVELS tended to measure c. 0.10 m. thick while the brown were c. 0.20 m. or more thick.

These layers would seem to have been relatively level, though they are not continuous throughout the area excavated. Burkitt records that there is an area about 6-7 m long, running north-south, at about the center of the mound, in which the red levels do not appear. In other words, the red levels run to c. 3-3.5 m. north and south of the middle of the structure and stop. What the nature of the soil in this intervening area was, I am afraid, I understand only vaguely. Presumably the dark brown earth found alternating with the levels of reddish soil, could continue into this gap, though this is not certain. Burkitt does note, however, that in this central area defined by the non-occurrence of the red levels and within the area enclosed by Features 3 and 4, there are two distinct levels of fragmented bone, each c. 0.05 m. thick. These layers appear as gray horizontal streaks and are seperated from eachother by by c. 0.50 m. of intervening earth. The upper level, located c. 1 m. below the summit datum and c. 0.30 m. above the base of Feature 3, has the more restricted horizontal distribution, being limited to within the the area defined by the lines of Features 3 and 4 and their hypothesised north and east counterparts. It might be possible to see this unit as either a floor or a deposit resting on a floor associated with this hypothesised structure, given its location above the base of Feature 3. This level would seem not to extend any further east than the east end of Feature 4 and its location totally within the confines of these features seems suggestive. Unfortunately, there is, presently, too little evidence to test this supposition.

The lower layer, at c. 1.5 m. below datum and c. 0.20 m. below the bases of Features 3 and 4, is also found within the limits of these two walls, but also extends "irregularly" for

some distance to the south underneath Feature 4.

As with the mound fill of Mound A, the fill of B was rich in pottery sherds, mostly of coarse wares, at roughly the same densities per cubic meter as those noted for A.

The only in situ deposit recovered from either mound was a single extended skeleton found resting on Feature 7 c. 1.6 m. south of Feature 4. Many of the bones were crushed though, apparently, not otherwise disturbed. The skeleton, itself, was laid on its back, arms by its sides with the hands turned palms down, and oriented north-south with the head to the south. The skull was turned so that it lay on its right side and Burkitt believed that he could see in it the "roll of the crown" produced through artificial depression of the forehead. The total length of this individual (designated here Feature 10) was c. 1.88 m. The only artifact found associated with these remains was a small, c. 1.5 cm. long, splinter of obsidian, described by Burkitt as a "lancet", found "stuck" among the vertebrae "below the chest".

Besides this deposit, the rest of the material recovered was similar in kind to that recovered from Mound A, with the exception of more bone, most of it in fragments, being found in B.

In sum, then, Mound B seems to have been a complex, multi-component construction whose stages of construction might very tentatively be summarised as follows. The first seems to be represented by Features 7-9 and appears to have consisted of a structure built of limestone chunks ~~packed~~ set in a matrix of earth. In form this structure may have consisted of at least two terraces, a lower eastern one (Feature 8) and a higher, wider western one (Feature 7), rising by levels from east to west to end in a vertical wall

(Feature 9) which, possibly, represents the remains of a summit platform. The relationship of this structure to the original hillslope is difficult to determine at the present time. Burkitt notes that in an excavation he conducted,"a few meters west of the mound", he came upon the, "natural rock of the hill", very close below the topsoil. This may indicate that the original summit platform represented by Feature 9 might have been built into the top of this hill. While it is difficult to evaluate this interpretation without more detailed information on such items as the exact location and appearance of the original hillslope, the depth of stone and earth fill composing the terraced structure and its relationship to the hill profile, it does seem possible that this early construction was, essentially, a terraced structure built into or against the EAST side of this low hill, rising east to west up its slope and culminating in a platform or superstructure of some sort near its summit. It must be noted that we cannot, at this stage, be sure if this structure constitutes the earliest construction in Mound B. Excavations did not reach the "natural" slope of the hill ~~in all cases~~ in many places and, as a result, we must begin here with the earliest known construction period and not one which we know to be absolutely the earliest.

The next event in this sequence might have been the deposition of Feature 10, the above-noted skeleton, on the surface of Feature 7. While this deposit seems primary, its origin as a secondary RE deposition is not precluded (see below). Determining the subsequent stage in the sequence is difficult. If we accept that the red levels identified by Burkitt once extended continuously through the mound north-south and that their absence in the center is due to some

perhaps associated with the construction of the Feature 3/4 structure

form of intrusive activity here, then we can posit that the formation of these alternating bands constitutes the third stage of identifiable activity. Burkitt interprets these successive levels as surfaces formed in the course of the growth of the mound, as good a possibility as any given our knowledge on the nature of these levels. Another possibility would see the structure represented by Features 3 and 4 being, originally, built on the aforementioned level of hard, "sticky"earth, its subsequent burial under the alternating levels of red and brown earth and then, later, an intrusion into this area, perhaps, in part, to locate stones for construction (the robbing of the north and south walls). A problem with this interpretation is that the hard "sticky" earth surface is very difficult to place stratigraphically as no measurements are ever given for it and it does not appear in the section. This highlights a problem that is quite common in the interpretations of the phases of construction/ activity in this structure; namely the lack of exact control we have over the stratigraphy. So much depends on having such control in a relatively complex situation such as B seems to represent, that we are quite lost without it. At present, the best evidence we have to sort out the next stage comes from the walls (Features 3 and 4) themselves. Burkitt notes that both of these features are too narrow to have supported any higher, free-standing construction, indicating that they might have been designed to be buried and packed from behind with earth. Second, the fact that the flattest faces of these stones seem to face into what might have been the interior of the"structure" would seem to suggest that this was the side which was to be viewed and not

c. 0.30 m. above the early terraced structure

the exterior. Again, this is thought to support a 'burial-in earth' position, the assumption being that the backs of these stones were covered with soil. On the basis of these two pieces of evidence, Burkitt concludes that Features 3 and 4 are all that remain of a now destroyed and robbed chamber, presumably intruded into the center of the mound. This interpretation follows the lines of the first option presented above. Problems with this position do exist, however. We need not, for example, assume that these walls are at their original widths, some of that distance distance having been either lost or robbed away through time. There would also seem to be some need to further research the basal widths of stone necessary to support a perishable structure, such as adobe, before dismissing the width of any wall as too narrow to have supported free-standing construction. The fact that the stones seem to face into the interior of the possible structure is, again, suggestive but, to my mind, not definitive. For the moment all we can say is that there seems to have been some disturbance in the distribution of what appear to have been continuous soil levels in the approximate center of the mound and that this disturbance, on the basis of extant wall widths and stone orientation of Features 3 and 4, may be associated with the construction of the structure represented by these features. Perhaps another ~~the strongest~~ arguement against the acceptance of this position is that if Features 3 and 4 are the remaining walls of a structure whose north and east walls have been robbed away then the above position would require us to assume two intrusions; the first to deposit the structure and the second to remove the walls (assuming, as Burkitt seems to, that this structure was designed to be buried).

While this would not be impossible, it does make for a more complicated position than that provided by the second option noted above. In short, while we may be on relatively secure grounds in stating that after the construction of the early teraced and later terraced structure, the mound was built up and a structure was built, we cannot presently state in which order this occurred.

The relationship of the two bone levels noted above to this intrusion is not easy to understand. The lower of the two would seem, at least, to be earlier than the structure represented by Features 3 and 4, as it is situated at a lower level than the base of these walls and runs under Feature 4. The higher one, with its distribution restricted to the area enclosed by these constructions and its occurrence near the top of them, would seem to have been deposited after they were built.

It should be noted that if we accept the occurrence of an intrusion into the center of the mound, we must be wary of accepting the interrment located on the surface of Feature 7 as being directly associated with the terminal use of that construction. Falling as it does within the area defined by the north and south break in the red levels, this skeleton may well have been intruded at any point after the abandonment of this early construction.

The final phase of prehistoric occupation of the mound might be indicated by the surface lines of stones discussed earlier (Features 1 and 2.). Presumably they were once part of a more extensive construction, though little of it was still extant at the time of Burkitt's investigations. The location, c. 0.02-0.03 m. below the surface of a string of seven small glass beads indicates at least some historic activity on the structure, though, because

of the paucity of remains associated with it, it would not seem to have been extensive.

Unfortunately, aside from the identification of an early and late period of occupation, with some sort of rather confused intermediate period, I am afraid that I cannot be more specific at this point on the periods of occupation of this structure. Further examination of the materials in the collections of the University Museum may shed some light on this question, though I am afraid that any such reconstruction can be no more than tentative.

IV. Discussion:

In this section we will deal very briefly with the possible functions associated with Mounds A and B. Burkitt describes both structures as burial mounds, whose primary functions were to serve as places of interrment. This arguement is, perhaps, weakest when applied to Mound A. Burkitt's principal support for this position may be summarized as follows: the location of several complete polychrome vessels within the fill of Mound A, primarily concentrated toward the middle of the structure, but mostly broken; the concentration of materials recovered, but primarily whole vessels, into loosely defined groups, on a horizontal and vertical basis, and the division of these groups into three broader concentrations, presumably indicative of former burial locii; the fact that some of the lines of the "superstructure" are too narrow and loosely laid to have supported free-standing construction and, hence, probably served as the outline of a buried chamber, probably a tomb. The problems I see with this interpretation may be outlined as follows: the almost total lack of bone recovered from this mound, only a few (seemingly less than 10) scattered fragments being found; the lack of well-defined, formally-laid out clusters of materials that might, arguably, have been associated with burials; and Burkitt's failure to specify in just which ways the "superstructure" of Mound A resembles a tomb. Burkitt's arguements that the lack of tight associations among artifacts and the absence of well-defined, stone-lined graves is due to the systematic robbing of stone by later diggers who, in the course of their work, also disturbed the remains, does

not sound convincing. In this arguement, only the latest graves in the upper portions of the mound would have been undisturbed by "grave diggers" and their proximity to the surface and, hence, to the actions of the elements, would ensure that they too would not be in pristine conditions when found. The absence of bone is attributed, possibly, to the chemical properties of the sand matrix. While this position cannot be discounted out of hand and, indeed some vessels do seem to have been stacked together, suggestive of intentional placement, the evidence does not seem sufficently strong to interpret the prime function of this mound as burial.

The case for Mound B is somewhat stronger. Here skeletal remains were found in much greater abundance and some ceramic vessels were stacked as though purposefully placed this was within the mound. Unfortunately, the bones are usually crushed or fragmentary or both and their association with artifacts which might have represented burial goods is questionable. As Burkitt himself notes, "There were skulls, and bones and pots and beads, but everything topsyturvey: things upside down, and jammed together, and broken, and scattered almost at random." Pieces from a single vessel have been recorded as being found up to 3 m. away from eachother, horizontally, and at a distance of c. 0.90 m. and more vertically. There does seem to exist some possible indications of burial activity in Mound B which might be summarised here. Despite the apparent random distribution of materials through the fill, some possible groups do seem to exist, though there does not appear to be any consistent pattern of association between certain types of material, e.g. bones with ceramic vessels, etc... Burkitt

~~Burkitt~~ also believes that a certain regularity characterizes the occurrence of skeletal remains, particularly skulls. These latter bones, he claims, quite often appear in pairs, side by side or near to eachother. He also notes that long bones, when found in large enough fragments to determine, are usually oriented north-south. Both of these pieces of information indicate to him that some form of formal pattern of interrment once characterized these remains. In at least one case, a carved stone "bead" was found "stuck in the teeth" of a crushed skull and Burkitt records that "several times" bones were found associated with a dark red earth which he believes might have been paint. The aforementioned 2 layers of bone near the center of the mound, in the upper level of which alone Burkitt claims to have identified the fragmentary remains of at least 5 individuals, are also suggested as evidence for some sort of burial activity. In addition to the relatively undisturbed individual discussed above (Feature 10), Burkitt claims to have recognized the skeleatal remains of 12-18 individuals on the surface of Feature 7, a situation which suggests the use of this floor as a"cemetary" to ~~Burkitt~~ him. Finally, most all of the skeletal remains and complete/partially complete vessels and beads recovered by Burkitt were located within the 6-7 m. gap in the deposition of the red soil levels. As discussed above, this is also the location of the structure represented by Features 3 and 4, a coincidence which Burkitt uses to support his contention that this now fragmented construction was intended to serve as a burial chamber. This concentration of materials within c. 3-3.5 m. of the mound's center might be interpreted as partly due to the fact that excavations did not extend much more than 0.5 m. north

and c. 2.5 m. south of that area. Still this clustering of remains within this zone and their marked decrease in frequency beyond it may be suggestive of the type(s) of activity carried out in this intrusive area, perhaps associated with burial.

The arguements presented would not seem to be convincing. The presence of recognizable, formal interrments would seem to be one minimal condition that must be met before a structure can be interpretted as a locus for primary burial. The lack of such evidence, beyond Feature 10, must seriously call into question a burial function for this structure, at least in terms af primary interrments. The fact that many of the bones found were "rotten" and that this might account for the absence of more complete remains, does not ~~account~~ explain how the one in situ individual remains relatively well-preserved while the rest do not. The arguement for systemmatic stone-robbing, resulting in the disruption and scattering of previous burials and the loss of stone from the graves, does not seem fully satisfactory either. To accept this position we would have to assume that the robbers had a very exact knowledge of where each of the graves in the mound was located and that their activities were so extensive that they almost completely obliterated the evidence for the existence of the earlier interrments. If such was the case, it seems, to my mind, that the results might be the same archaeologically as if no formal burials had ever been interred in the mound and we would have no clear way of assigning any function to this structure. With respect to the groupings of materials and the pairing of skulls noted above, my impression is that they do not appear to be sufficentl clear to support Burkitt's contentions. As with Mound A, the

evidence seems, at present, to be too scanty to allow a definite identification of the activities carried out at Mound B.

Finally, we might agree with Burkitt's interpretation of the relatively dense concentrations of pottery sherds in both mounds as indicative of their having been built up of fill culled from trash deposits in the immediate area. In fact, we might propose an alternative to Burkitt's opinions presented above, and state that much of the material found in Mounds A and B that Burkitt ascribes to burial activities, might have come into the mounds as part of this fill. The bones, themselves, might represent secondary interrments redeposited here from midden contexts while the whole vessels, many of which were found broken with their pieces sometimes scattered, might have originally come from similar deposits. Such an interpretation ~~might~~ could account for the "topsy-turvey" appearance of the materials from both mounds described by Burkitt.

Table I.

Feature Equivalences:

Mound A:

Feature 1	Basal southern stone construction.
Feature 1a	Low southern wall at the base of Feature 1.
Feature 2	Basal northern stone construction.
Feature 3	Basal eastern stone construction.
Feature 4	Basal western stone construction.
Feature 5	The largest, outermost stone rectangle of the superstructure.
Feature 6	The second enclosure of the superstructure.
Feature 7	The smallest, central enclosure of the superstructure.
Feature 8	Flattened area to the south of Mound A.
Feature 9	Stone-faced southern hillslope.
Feature 10	Stone-faced northern hillslope.

Mound B:

Feature 1	North-south trending surface line of stones.
Feature 2	East-west trending surface line of stones.
Feature 3	Northeast-southwest trending wall beneath the summit of Mound B.
Feature 4	Southeast-northwest trending wall beneath the summit of Mound B.
Feature 5	Pile of stones just east of the north end of Feature 3.
Feature 6	Isolated pile of stones, west of Feature 3.
Feature 7	Upper "pavement" of the early terraced structure.
Feature 8	Lower, eastern "pavement", early terraced structure.

Table I.

Feature Equivalences:

Feature 9	Vertical rose at the western edge of Feature 7.
Feature 10	In situ skeletal interrment on the surface of Feature 7.

chamn materials

Preliminary Form Classification:

vertical-walled

A. Cylinder:

N: 19.

Description: Straight, vertical walls; little difference from orifice to base in the location of the widest point. Flat base.

Height/width range: .6349-1.2756 (actual range)
1.0457-0.7559 (range within one standard deviation of the mean).

Height/width mean: 0.9008

Catalogue Numbers:

NA 11185	NA 11310	NA 11038	NA 11080	NA 11056
11222	11184	11067	11079	41-36-1A
11074	11075	11041	11095	41-36-2A
11221	11068	11039	11175	

Variations:
Subtype A: Same description as above but with a tripod support.

Catalogue Number:
Na 11175

Height/width value: 1.2756.

Subtype B: Same description as above, no supports.

Catalogue Numbers:
All of the rest.

Height/width mean: 0.8849. (Empirical range: 0.6349 - 1.1364)

B. Wide Mouth Cylinder:

N: 2

Description: Walls are almost vertical slightly incurving to in-slanting; widest point is the orifice. Flat base.

Height/width range: 1.4851-1.5333

Height/width mean: 1.5092

Catalogue Numbers:
NA 11085 NA 11159

Variations:
Subtype A: Same description as above, but with a tripod support.

Catalogue Number: NA 11159 Height/width value: 1.~~4636~~ 5333

Subtype B: Same description as above, but with no support.

Catalogue Number: NA 11085 Height/width value: 1.4851

C. Hemispherical Bowl:

N: 13

Description: Hemispherical walls; orifice as the widest point.

Height/width range: 2.1312-4.0645 (Empirical range)
2.3908-3.6926 (Range within one standard deviation of the mean).

Height/width mean: 3.0417

Catalogue Numbers:

NA 11086	NA 11238	NA 11202	?*
11066	11037	11269	
11070	11239	11223	
11157	11262	11171	

Variations:
Subtype A: Same description as above; ring base support.

Catalogue Numbers:

NA 11086	NA 11157	NA 11202
11066	11037	
11070	11239	

Height/width mean: 3.4884 (Empirical range: 2.4276 - 4.0645)

Subtype B: Same description as above; tripod support.

Catalogue Numbers:
NA 11238
11262
11269

Height/width mean: 2.2404 (Empirical range: 2.1312 - 2.3077)

Subtype C: Same description as above, no supports.

Catalogue Numbers:
NA 11232
11171
?*

Height/width mean: 2.8008 (Empirical range: 2.6279 - 3.1273).

* Presumably a vessel from Chama, but unnumbered.

D. Composite Silhouette Bowl:

N: 10

Description: Composite profile with either a more or less pronounced flange or basal break located c. 1/3 to 2/3 the way down from the rim; orifice is the widest point. Convexely curved bases.

Height/width range: 2.5432-4.3250 (empirical range)
2.7756-3.9066 (range within one standard deviation of the mean)

Height/width mean: 3.3411

Catalogue Numbers:

NA 11219	NA 11089	NA 11043	NA 11192
11217	11179	11251	
11084	11076	11096	

Variations:
Subtype A: Same description as above; ring base supports.

Catalogue Numbers:
NA 11219
11217

Height/width mean: 2.6030 (Empirical range: 2.5432 - 2.6627)

Subtype B: Same description as above; tripod supports.

Catalogue Numbers:
NA 11084 NA 11076
11089 11043
11179

Height/width mean: 3.6179 (Empirical range: 2.6543 - 4.3250)

Subtype C: Same description as above; tetrapod supports.

Catalogue Number: NA 11251

Height/width value: 3.1319

Subtype D: Same description as above; no supports.

Catalogue Numbers:
NA 11096
11192

Height/width mean: 3.4918 (Empirical range: 3.3519 - 3.6316)

E. Flaring Walled Bowl:

N: 1

Description: Walls slant directly out from the base at a marked angle; orifice is the widest point. Flat base, no supports.

Height/width value: 2.6230

Catalogue Number: NA 11166

F. High Walled Bowl:

N: 2

Description: High, slightly outcurving (convex) walls; orifice is the widest point. Flat Bases.

Height/width range: 1.3805-1.4902

Height/width mean: 1.4345

Catalogue Numbers:
NA 11151
11145

G. Vertical Walled Bowl:

N: 3

Description: The walls are more or less vertical and extend down to a pronounced break below which the bottoms are rounded. In two examples, the walls compose 2/3-3/4 of the vessel's silhouette, in the other they only make up 1/3-1/2 of the total profile. The widest point is ~~pretty much~~ the same from the rim down to the 'break'. Roughly flattened, asymmetrical bases, no supports.

Height/width range: 2.0000-2.9653 (empirical range)
1.9765-2.8003 (range within one standard deviation of the mean)

Height/width mean: 2.3884

Catalogue Numbers:
NA 11224
11201
11248

H. Simple Constricted Bowls:

N: 5

Description: Hemispherical walls, curving in at the rim to form a constricted orifice; the widest point is located c. 1/2 to 1/3 the way down from the rim.

Height/width range: 1.1075-2.0947 (empirical range)
0.9604-1.7182 (range within one standard deviation of the mean)

Height/width mean: 1.3383

Catalogue Numbers:
NA 11255 NA 11236 NA 11177
11216 11218

Variations:
Subtype A: Same description as above; ring base support.

Catalogue Number: NA 11218

Height/width value: 1.1552

Subtype B: Same description as above; tripod support.

Catalogue Number: NA 11236

Height/width value: 1.1075

Subtype C: Same description as above; no supports.

Catalogue Numbers:
NA 11255
11216
11177

Height/width mean: 1.4763 (Empirical Range: 1.1212-2.0947.)

I. Rimmed Constricted Bowls:

N: 3

Description: Hemispherical walls curving up to either a low vertical or slightly outflaring rim; the orifice is restricted; the widest point is located c. 1/2 way down from the rim.

Height/width range: 1.3559-1.7339 (empirical range)
1.4283-1.7787 (range within one standard deviation of the mean.)

Height/width mean: 1.6035

Catalogue Numbers:
NA 11226
11200
11249

Variations:
Subtype A: Same description as above; ring base support.

Catalogue Number: NA 11226

Height/width value: 1.3559

Subtype B: Same description as above; tripod supports.

Catalogue Numbers:

NA 11200
11249

Height/width mean: 1.7273 (Empirical Range: 1.7207-1.7339)

J. Rimmed Constricted Flanged Bowl:

N: 1

Description: Hemispherical walls curving up to a low vertical rim; located c. 1/3 of the way down from the rim is a marked flange protruding c. 2 cm. out from the line of the rim; the widest point is located at this flange; restricted orifice; tripod support.

Height/width value: 1.5455

Catalogue Number: NA 11165

K. High Collared Bowls:

N: 1

Description: Composite silhouette in that hemispherical walls curve up to a tall (comprising c. 1/2 of the vessel's total height) vertical collar; the widest point is c. 2/3 of the way down below the rim. Flat base No supports.

Height/width value: 0.5314

Catalogue Number: NA 11088

L. Low Collared Bowls:

N: 5

Description: Composite silhouette in that hemispherical walls (comprising roughly 2/3 of the total height) curve up to a more or less vertical collar; the widest point is c. 1/2 the way down from the rim. Flat bases, no supports.

Height/width range: 1.0242-1.5942 (empirical range)
1.1986-1.6024 (range within one standard deviation of the mean)

Height/width mean: 1.4005

Catalogue Numbers:
NA 11031 NA 11077
11242 11069
11240

Variations: A question here; one of these vessels (NA 11069) has a slightly in-slanting collar and one (NA 11077) has a concavely curved collar and the widest point at the orifice. Do these variations, especially the latter, constitute grounds for defining subtypes, especially since all other subtypes have been defined on the basis of the nature of supports?

M. Flange Rimmed Bowls:

N: 2

Description: Hemispherical walls; the widest point is at the edge of the markedly flattened rim; constricted orifices. Rounded bottoms, high tripod supports.

Height/width range: .6733-.7536

Height/width mean: .7135

Catalogue Numbers:
NA 11231
11230

N. Shouldered Jars:

N: 2

Description: Hemispherical body gives way to a markedly constricted neck; the widest point is c. 2/3 the way down below the rim. Concave basas.

Height/width range: 0.4966-.6074 Height/width mean: 0.5520

Catalogue Numbers:
NA 11194 NA 11196

Note: Would it be possible to introduce another criteria to help seperate out the Rimmed Constricted Bowls, Rimmed Constricted Flanged Bowls, and the two types of Collared Bowls? As it stands now, their descriptions and Height/width ranges do not seem sufficently distinctive. The criteria I was considering was the ratio between the height of the collar/rim and the overall height of the vessel. I have worked out these figures and they are listed below.

Rimmed Constricted Bowls (Flanged and Unflanged):

Rim and/or collar Height/Overall Height:

NA 11200	2/10.3 =	1/5
11249	1.5/9.8=	1/6.5
11226	1.6/11.8=	1/7
11165	2.0/9.3=	1/4.6

Low Collared Bowls:

NA 11031	2.0/6.9=	1/3.4
11240	2.2/6.3=	1/2.86
11077	2.8/9.5=	1/3.39
11242	3.5/8.4=	1/2.4
11069	3.2/12.4=	1/3.87

High Collared Bowls:

NA 11088	11.7/23.9=	1/2.0

As these valuse do seem to parcel out into seemingly discrete units they might be of help in distinguishing these preliminary form types. At least, they might give a more rigorously defined meaning to terms such as "collars" and "rims," on the basis of this ratio. Just a thought.

A PRELIMINARY FORM CLASSIFICATION OF THE POTTERY OF CHAMA: A SECOND APPROXIMATION

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Anthr. 621
Dr. Robert J. Sharer

I. Cylinders

N: 26

Frequency: 21.14%

Description: Straight, vertical walls; little difference exists in width from the orifice to the base; flat base.

Orifice/Height Range: .6349-1.2756

Orifice/Height Mean: .8597

Catalogue Numbers:

NA 11185	NA 11184	NA 11041	NA 11175	A1/77C
11222	11075	11039	11056	41-36-9 (A1/74A)
11074	11068	11080	41-36-1A	A1/58
11221	11038	11079	41-36-2A	41-36-10 (A1/73C)
11310	11067	11095	A4/1B	41-36-32*
				A4/1C

(*Note that 41-36-32 has its orifice area missing and, hence, no orifice/height ratio is computable).

General Provenience:

Associated Types:

Variants:

Variant 1
N: 23

Frequency: 88.46%

Description: Same description as that given above but with the specification of no supports.

Orifice/Height Range: .6349-1.1364

Orifice/Height Mean: .9027

Catalogue Numbers:

NA 11185	NA 11310	NA 11038	NA 11080	41-36-1A	A1/58
11222	11184	11067	11079	41-36-2A	41-36-32
11074	11075	11041	11095	A4/1B	A4/1C
11221	11068	11039	11056	41-36-9 (A1/74A)	

Variant 2
N: 1

Frequency: 3.85%

Description: Same description as that given for cylinders in general but with the added specification of tripod supports.

Orifice/Height Value: 1.2756

Catalogue Number: NA 11175

Varaiant 5
N: 2

Frequency: 7.69%

Description: Same as for cylinders in general, but with the specification of a pedastel base support.

Orifice/Height Range: .7857-.8242

Orifice/Height Mean: .8050

Catalogue Numbers:
A1/77C 41-36-10 (A1/73C)

IA. Wide-Mouthed Cylinders

N: 2

Frequency: 1.63%

Description: The walls are almost vertical (very gradually in-slanting fromm the orifice to the base); the widest point is at the orifice.

Orifice/Height Range: 1.4851-1.5333

Orifice/Height Mean: 1.5092

Catalogue Numbers:
NA 11085 NA 11159

Variants:

Variant 1
N: 1

Frequency: 50%

Description: Same as above but with the specification of no supports.

Orifice/Height Value: 1.4851 Catalogue Number: NA 11085

Variant 2
N: 1

Frequency: 50%

Description: Same as above but with the specification of tripod supports.

Orifice/Height Value: 1.5333 Catalogue Number: NA 11159

IIA. Hemispherical, Unflanged Bowls

N: 16

Frequency: 13.01%

Description: Hemispherical walls curve uninteruptedly to the base; the widest point is at the orifice.

Orifice/Height Range: 2.0875-4.0645

Orifice/Height Mean: 2.9235

Catalogue Numbers:

NA 11086	NA 11157	NA 11239	NA 11269	41-36-11 (A1/77d)	A1/74D
11066	11238	11262	11223	A3/21B	
11070	11037	11202	11171	A3/64	

Variants:

Variant 1
N: 4

Frequency: 25%

Description: Same as above but with the specification of no supports.

Orifice/Height Range: 2.0875-2.8500

Orifice/Height Mean: 2.5531

Catalogue Numbers:

NA 11223	A3/64
11171	A1/74D

Variant 2
N: 4

Frequency: 25%

Description: Same as above but with the specification of tripod supports.

Orifice/Height Range: 2.1312-2.9831

Orifice/Height Mean: 2.4261 Catalogue Numbers: NA 11238 NA 11262
11269 41-36-11

Variant 3
N: 5

Frequency: 31.25%

Description: Same as above but with the specification of ring base supports.

Orifice/Height Range: 2.4276-4.0645

Orifice/Height Mean: 3.3867

Catalogue Numbers:
NA 11086 NA 11037 NA 11202
11066 11239

Varaiant 4
N: 2

Frequency: 12.5%

Description: Same as above but with the specification of a concave base type of support.

Orifice/Height Range: 3.7231-3.7619

Orifice/Height Mean: 3.7425

Catalogue Numbers:
NA 11070
11157

Variant 5
N: 1

Frequency: 6.25%

Description: Same as the above but with the specification of a pedastel base support.

Orifice/Height Value: 2.4900

Catalogue Number: A3/21B

IIB. Flanged Hemispherical Bowls

N: 5

Frequency: 4.07%

Description: Hemispherical walls, the orifice is the widest point; a flange is located c. 1/3-2/3 the way down the profile from the rim.

Orifice/Height Range: 2.4184-3.3028

Orifice/Height Mean: 2.8350

IIB.

Catalogue Numbers:

41-36-43 (A3/25)	A3/17A
A3/17B (?)	A3/17C
A3/17B	

Variants:

Variant 2
N: 1

Frequency: 20%

Description: Same as above but with the specification of tripod supports.

Orifice/Height Value: 2.4184

Catalogue Number: 41-36-43 (A3/25)

Variant 3
N: 4

Frequency: 80%

Description: Same as above but with the specification of ring base supports.

Orifice/Height Range: 2.6199-3.3028

Orifice/Height Mean: 2.9392

Catalogue Numbers:

A3/17B (?)	A3/17A
A3/17B	A3/17C

IIIA. Outflaring, Composite Silhouette Bowls

N: 10

Frequency: 8.13%

Description: The general impression provided by these vessels is of an outflaring upper portion of the profile (comprising c. 1/3-2/3 of that total profile) below which the walls are more convexely rounded. The nature of the outflaring upper section is the subject of some variation. In 6 of the vessels the upper portion of the profile defines a concave curve associated with the outflaring (NA 11076, 11192, 11096 41-36-6, A1/65, A3/64F) while the remaining four flare out more directly (NA 11251, 41-36-4, A1/77A, A1/74B). The widest point is at the orifice.

Orifice/Height Range: 2.0723-3.8276

Orifice/Height Mean: 3.0250

Catalogue Numbers:

NA 11076	NA 11192	A1/65	A3/64F
11251	41-36-4 (A1/74C)	A1/77A	
11096	41-36-6 (A1/74F)	A1/74B	

Variant 1
N: 2

Frequency: 20%

Description: Same as above but with the specification of no supports. Both have concavely curving upper portions.

Orifice/Height Range: 3.3519-3.6316

Orifice/Height Mean: 3.4918

Catalogue Numbers:
NA 11096 NA 11192

Variant 2
N: 6

Frequency: 60%

Description: Same as above but with the specification of tripod supports. Their numbers are equally divided between concavely curving and directly flaring upper portions. 4 of the vessels have zoomorphic heads as supports (41-36-4, 41-36-6, A1/77A, A1/74B).

Orifice/Height Range: 2.0723-3.8276

Orifice/Height Mean: 2.8724

Catalogue Numbers:

NA 11076	A1/77A
41-36-4 (A1/74C)	A1/74B
41-36-6 (A1/74F)	A3/64F

Variant 3
N: 1

Frequency: 10%

Description: Same as above but with a ring base support. Concavely curving upper portion.

Orifice/Height Value: 2.9000

Catalogue Number: A1/65

Variant 6
N: 1

Frequency: 10%

Description: Same as above but with the specification of tetrapod supports. Directly flaring upper portion.

Orifice/Height Value: 3.1319

Catalogue Number: NA 11251

IIIB. Outflaring, Flanged Composite Silhouette Bowls

N: 14

Frequency: 11.38%

Description: The description of the form characteristic of this category is very similar to that noted for IIIA. A composite silhouette in that the lower 1/3-2/3 of the vessel curves up convexely to a flange above which the vessel walls either flare out directly (NA 11043, 11084, A3/64B, A3/64C, 41-36-36, 41-36-39, A1/72A) or curve out concavely (NA 11219, 11217, 11089, 11179, 41-36-48, A3/64G, A3/28A). The widest point is at the orifice.

Orifice/Height Range: 2.5432-6.2857

Orifice/Height Mean: 3.2038

Catalogue Numbers:

NA 11219	NA 11089	A3/64B	41-36-39 (A3/31A)	A1/72A
11217	11043	A3/64C	41-36-48 (A3/64D)	A3/28A
11084	11179	41-36-36 (A3/12A)	A3/64G	

Variant 1
N: 1

Frequency: 7.14%

Description: Same as above but with the specification of no supports. The upper vessel walls flare out directly.

Orifice/Height Value: 2.9495

Catalogue Number: 41-36-36 (A3/12A)

Variant 2
N: 8

Frequency: 57.14%

Description: Same as the above but with the specification of tripod supports. 5of the vessels have directly flaring upper portions, 3 are concavely curving.

Orifice/Height Range: 2.3958-6.2857

Orifice/Height Mean: 3.5853

Catalogue Numbers:
NA 11084 NA 11179 A1/72A
11089 41-36-39 (A3/21A) A3/28A
11043 A3/64G

Variant 3
N: 5

Frequency: 35.71%

Description: Same as above but with the specification of ring base supports. 3 of the vessels have concavely curving upper portions while 2 flare out directly.

Orifice/Height Range: 2.5432-2.7674

Orifice/Height Mean: 2.6443

Catalogue Numbers:
NA 11219 A3/64C
11217 41-36-48 (A3/64D)
A3/64B

IVA. High, Vertical Necked Bowls

N: 3

Frequency: 2.44%

Description: Convexely curving walls comprise the lower 1/2 [illegible] of the profile while the upper portion of the vessels rise almost vertically (actually slanting in slightly and gradually) to the orifice. The widest point is c. 2/3 the way down below the rim. Flat base, no supports.

Orifice/Height Range: .5314-.5517

Orifice/Height Mean: .5419

Catalogue Numbers:
NA 11088
A1/74G
A1/73B

IVA.

Neck Height/Total Height Ratios:

NA 11088	11.7/23.9	1/2.0
A1/74G	6.6/15.3	1/2.3
A1/73B	6.3/14.5	1/2.3

VA. Low, Vertical Necked Bowls

N: 3

Frequency: 2.44%

Description: Convexely curving walls comprise the lower 2/3 of the total height while the upper portion of the vessel rises vertically to the orifice. The widest point is c. 1/2 the way down from the rim.

Orifice/Height Range: 1.4286-1.5942

Orifice/Height Mean: 1.5261

Catalogue Numbers:
NA 11031 NA 11240
11242

Neck Height/Total Height Ratios:

NA 11031	2.0/6.9	1/3.4
11242	3.5/8.4	1/2.4
11240	2.2/6.3	1/2.86

Variants:

Variant 3
N: 1

Frequency: 33.33%

Description: Same as above but for the specification of ring base supports.

Orifice/Height Value: 1.5942

Catalogue Number: NA 11031

Variant 4
N: 2

Frequency: 66.66%

Description: Same as the above but for the specification of concave base type of support.

Orifice/Height Range: 1.4286-1.5555

Orifice/Height Mean: 1.4921

Catalogue Numbers:
NA 11242 NA 11240

VB. Outflaring Necked Bowls

N: 4

Frequency: 3.25%

Description: The lower 1/2-2/3 of the vessels consists of convexely curving walls above which the neck flares out to the orifice. In three cases the neck curves concavely (A4/1A, 41-36-49, NA 11077) while in one it flares out directly (A3/64A). The location of the widest point presents some variation: in three of the cases (A3/64A, NA 11077, 41-36-49) the orifice is the widest point while in one (A4/1A) the widest point is located c. 2/3 the way down below the rim. Note, however, that in the three former cases a point c. 1/2-2/3 the way down below the rim was within 3 mm. of being the widest point.

Orifice/Height Range: .9792-1.5728

Orifice/Height Mean: 1.3198

Catalogue Numbers:
A4/1A 41-36-49 (A3/64E)
A3/64A NA 11077

Neck Height/Total Height Ratios:

A4/1A	4.4/9.6	1/2.2
A3/64A	5.8/10.3	1/1.8
41-36-49	3.8/10.1	1/2.7
NA 11077	2.8/9.5	1/3.39

Variants:

Variant 1
N: 1

Frequency: 25%

Description: Same as above with the specification of no supports. The neck curves out concavely and the orifice is the widest point.

Orifice/Height Value: 1.4000

Catalogue Number: NA 11077

Variant 2
N: 1

Frequency: 25%

Description: Same as above but with the specification of tripod supports. The neck curves concavely and the orifice is the widest point.

Orifice/Height Value: 1.3267 Catalogue Number: 41-36-49 (A3/64E)

VB.

Variant 3
N: 2

Frequency: 50%

Description: Same as above but with the specification of ring base supports. In one of the vessels the neck curves concavely, in one it flares directly. In one case the orifice is the widest point, in the other it is a point c. 2/3 the way down below the rim.

Orifice/Height Range: .9792-1.5728

Orifice/Height Mean: 1.2760

Catalogue Numbers:
A4/1A A3/64A

VC. Low, In-Sloping Necked Bowls

N: 2

Frequency: 1.63%

Description: The lower 2/3-3/4 of the vessel curves convexely up to a gently in-sloping neck. The widest point is c. 1/2-1/3 the way down from the rim. Flat bases, no supports.

Orifice/Height Range: 1.0112-1.0242

Orifice/Height Mean: 1.0177

Catalogue Numbers:
NA 11069 A3/28B

Neck Height/Total Height Ratios:

NA 11069	3.2/12.4	1/3.9
A3/28B	3.5/13.45	1/3.9

VI.. Simple Constricted Orifice Vessels

N: 10

Frequency: 8.13%

Description: Convexely curving walls, curving in at the rim to form a constricted orifice. Considerable variation in the location of the widest point; from 1/4-2/3 the way down below the rim, though the majority (7) concentrate in the 1/3-1/2 area, 2 in the 2/3-3/4 range and one in the 1/4-1/3 range.

Orifice/Height Range: .7314-2.0947

Orifice/Height Mean: 1.3064

Catalogue Numbers:

VI.

Catalogue Numbers:

NA 11255	NA 11218	41-36-47 (A3/15D)	41-36-44 (a3/19
11216	11177	A1/74H	
11236	A3/61	A1/69	

Variants:

Variant 1
N: 8

Frequency: 80%

Description: Same as the above but with the specification of no supports. The location of the widest point ranges over the full spectrum from 1/3 the way down below the rim to 3/4

Orifice/Height Range: .7314-2.0947

Orifice/Height Mean: 1.3503

Catalogue Numbers:

NA 11255	A3/61	A1/69
11216	41-36-47 (A3/15D)	41-36-44 (A3/19)
11177	A1/74H	

Variant 2
N: 1
Frequency: 10%

Description: Same as above but with the specification of anthropomorphic tripod supports. Widest point, c. 1/2-1/3 the way down from the rim.

Orifice/Height Value: 1.1075

Catalogue Number: NA 11236

Variant 5
N: 1

Frequency: 10%

Description: Same as above but with the specification of a pedastel base. Widest point, c. 1/2 the way down from the rim.

Orifice/Height Value: 1.1552

Catalogue Number: NA 11218

VIIA. Rimmed Constricted Orifice Bowls

N: 4

Frequency: 3.25%

Description: Convexely curving walls curving up to either a low vertical or slightly outflaring rim; the orifice is restricted; the widest point is located c. 1/2-2/3 the way down below the rim.

Orifice/Height Range: 1.2000-1.7339

Orifice/Height Mean: 1.5026

Catalogue Numbers:
NA 11226 NA 11249
11200 A3/15B

Rim . Height/Total Height Ratios:

NA 11226	1.6/11.8	1/7
11200	2.0/10.3	1/5
11249	1.5/9.8	1/6.5
A3/15B	.9/11.0	1/12.2

Variants:

Variant 1
N: 1

Frequency: 25%

Description: Same as above but with the specification of no supports.

Orifice/Height Value: 1.2000

Catalogue Number: A3/15B

Variant 2
N: 2

Frequency: 50%

Description: Same as the above but with the specification of low tripod supports.

Orifice/Height Range: 1.7207-1.7339

Orifice/Height Mean: 1.7273

Catalogue Numbers:
NA 11200
11249

VIIA.

Variant 5
N: 1

Frequency: 25%

Description: Same as above but with the specification of a pedastel base.

Orifice/Height Value: 1.3559

Catalogue Number: NA 11226

VIIB. Rimmed, Flanged Constricted Orifice Bowl

N: 1

Frequency: 0.81%

Description: Hemispherical walls curving up to a low, gently in-slanting rim; located c. 1/3 of the way down from the rim is a marked flange protruding c. 2 cm. out from the line of the rim; the widest point is located on this flange; restricted orifice, tripod supports

Orifice/Height Value: 1.5455

Catalogue Number: NA 11165

Rim Height/Total Height Ratio: NA 11165 2.0/9.3 1/4.6

VIII. Flaring Walled Bowl

N: 1

Frequency: 0.81%

Description: Walls slant out directly from the base to the orifice at a marked angle. The orifice is the widest point. Flat base, no supports.

Orifice/Height Value: 2.6230

Catalogue Number: NA 11166

IX. High Walled Bowls

N: 2

Frequency: 1.63%

Description: High, slightly outcurving (convex) walls; orifice is the widest point. Flat bases, no supports.

Orifice/Height Range: 1.3805-1.4902

Orifice/Height Mean: 1.4354

Catalogue Numbers:
NA 11151
11145

X. Vertical Walled Bowls

N: 3

Frequency: 2.44%

Description: The walls are more or less vertical and extend down from the orifice to a pronounced break below which the bottoms are convexely rounded. In two examples, these walls compose 2/3-3/4 of the vessel's silhouette (NA 11224 and 11201) in the other, they make up only 1/3-1/2 of the total profile. The widest point is the same from the rim down to the "break". Roughly flattened, asymmetrical bases, no supports.

Orifice/Height Range: 2.0000-2.9653

Orifice/Height Mean: 2.3884

Catalogue Numbers:
NA 11224
11201
11248

XI. Handled Bowls:

N: 2

Frequency: 1.63%

Description: Hemispherical walls; constricted orifice; the widest point is at the edge of the markedly flattened rim. Rounded bottoms, high tripod supports.

Orifice/Height Range: .6733-.7536

Orifice/Height Mean: .7135

Catalogue Numbers: NA 11231
11230

XIIA. Necked Shouldered Vessels

N: 7

Frequency: 5.69%

Description: The lower 2/3-3/4 of the vessel's height is made up of convexely curving walls which curve in markedly, forming a pronounced shoulder, before joining the neck which then rises nearly vertically to the orifice. The widest point in 6 of the vessels is located c. 1/2-2/3 the way down from the rim, in one (NA11194) it is situated c. 2/3-3/4 of the way down.

Orifice/Height Range: .4099-.6824

Orifice/Height Mean: .5306

Catalogue Numbers:

41-36-40	41-36-13	NA 11196
A3/26	A3/15A	
41-36-12 (A1/77E)	NA 11194	

Neck Height/Total Height Ratios:

41-36-40	3.9/13.0	1/3.3
A3/26	4.0/12.75	1/3.2
41-36-12	6.0/16.1	1/2.7
41-36-13	5.0/18.8	1/3.8
A3/15A	4.8/17.0	1/3.5
Na 11194	3.9/12.1	1/3.1
NA 11196	3.4/14.5	1/4.3

Variants:

Variant 1
N: 4

Frequency: 57.14%

Description: Same as above but with the specification of no supports.

Orifice/Height Range: .4149-.6824

Orifice/Height Mean: .5501

Catalogue Numbers:

41-36-40	41-36-13
A3/26	A3/15A

XIIA.

Variant 2
N: 1

Frequency: 14.29%

Description: Same as above but with the specification of tripod supports.

Orifice/Height Value: .4099

Catalogue Number: 41-36-12 (A1/77E)

Variant 4
N: 2

Frequency: 28.57%

Description: Same as above but with the specification of concave base type of support.

Orifice/Height Range: .4966-.6074

Orifice/Height Mean: .5520

Catalogue Numbers:
NA 11194 NA 11196

XIIB. Necked, Flanged Shouldered Vessels

N: 1

Frequency: 0.81%

Description: The lower 2/3 of the vessel consists of convexely curving walls curving in markedly to form a pronounced shoulder above which the neck rises nearly vertically to the orifice. A flange occurs medially. The widest point is located on this flange, c. 1/2 the way down from the rim. CONCAVE BASE.

Orifice/Height Value: .5766

Catalogue Number: A1/77B

Neck Height/Total Height Ratio: 3.8/11.1 1/2.9

XIIC. Necked, Squat Shouldered Vessel

N: 1

Frequency: 0.81%

Description: The lower 3/4 of the profile curves convexely forming a pronounced shoulder just below the neck which curves very concavely up to the orifice. The widest point is located c. 1/2-2/3 the way down from the rim. Flat Base, No supports.

Orifice/Height Value: 1.2842

Catalogue Number: 41-36-37 (A3/12B)

Neck Height/Total Height Ratio: 2.6/9.5 1/3.7

XV. Outflaring Rimmed Bowl

N: 3

Frequency: 2.44%

Description: The lower 4/5-5/6 of the vessel's total height consists of convexely curving walls above which the rims flare out markedly. The widest point is located c. 1/2-2/3 the way down from the rim. In two cases the rims flare out directly (A3/20 and A3/27A) in one (41-36-42) the rim curves concavely as it flares out. No supports.

Orifice/Height Range: .7107-1.0413

Orifice/Height Mean: .8770

Catalogue Numbers:
A3/20 41-36-42
A3/27A

Rim Height/Total Height Ratios:			
	A3/20	2.1/12.1	1/5.8
	A3/27A	1.8/12.1	1/6.7
	41-36-42	1.5/9.1	1/6.1

XVI. Shoe-Shaped Vessels

N: 2

Frequency: 1.63%

Description: The lower 4/5-5/6 of the vessel curves convexely but asymmetrically up to join a low, concavely curving neck; a slightly restricted orifice is thus formed. With regards this asymmetry, one side of the vessel's lower section curves out to almost a point, extending c. 7.5-7.6 cm. beyond the rim line while the other side curves more gradually to the neck, hence giving the impression of a "shoe".

XVI.

Description (cont.): The widest point is on the tip of this "shoe", c. 1/2 the way down from the rim. 1 vessel, (41-36-38) has a handle extending from the rim to the shoulder on the opposite side of the vessel from the "point". No supports.

Orifice/Height Range: .6304-.8265*

Orifice/Height Mean: .7285

Catalogue Numbers:
A3/27B 41-36-38 (A3/28C)

Neck Height/Total Height Ratios: A3/27B 3.4/18.4 1/5.4
41-36-38 2.2/12.1 1/5.5

* Note that the orifice width here is an exterior measurement. The nature of the drawing I was working from precluded obtaining the usual interior measurement.

XVII. Flaring Walled Cylinder

N: 1

Frequency: 0.81%

Description: Gently, directly out-flaring walls; the widest point is at the orifice. Flat base, no supports.

Orifice/Height Value: .9828

Catalogue Number: 41-36-33 (A4/1E)

Note: This is not a very satisfactory category (even less so than the rest) and I am becoming more and more convinced that this vessel should be placed in Category IA.

TOTAL N: 123 100.01%