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*Edited by*  
**JAMES HENRY BREASTED**



DECORATED JAR WITH BREASTS, FIELD NO. 184. LATE PERIOD III



RESEARCHES IN ANATOLIA—VOLUME II

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THE ALISHAR HÜYÜK  
SEASON OF 1927

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ORIENTAL INSTITUTE PUBLICATIONS  
VOLUME VI

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RESEARCHES IN ANATOLIA—VOLUME II

# THE ALISHAR HÜYÜK SEASON OF 1927

PART I

BY HANS HENNING VON DER OSTEN

AND

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*Field Directors of the Anatolian Expedition*



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## FOREWORD

The plans of the Oriental Institute for the investigation of Hittite civilization involve three distinct lines of research: (1) exploration, (2) survey, and (3) excavation.

The explorations project, as finally laid out by Dr. von der Osten, comprises seven districts, occupying a region bounded on the west by a meridian a little west of Ankara, thence northward by the Küzül Irmak (the ancient Halys), and on the east by a line extending from Batum to Lake Van and thence due southward. The northern boundary is the shore of the Black Sea, while the southern boundary follows the Mediterranean coast to Alexandretta, then continues roughly eastward overland from the latter point until it meets the Lake Van meridian. Explorations in this region began in the summer of 1926, and have since covered much of the western half of the territory above indicated. In carrying out these explorations, Dr. von der Osten has laid down on his maps some three hundred new sites, varying from large to small, most of them entirely unknown to scholars heretofore. His preliminary accounts<sup>1</sup> describe these researches to the end of 1928. A fuller report by the same author is devoted especially to the monuments and remains which he found in the summer of 1926 in the basin of the Küzül Irmak.<sup>2</sup> The projected survey has for obvious reasons not been able to keep up with the explorations, and thus far only a beginning of the survey program has been made.

The culmination of these preliminary researches is, of course, the process of excavation. The recovery of additional archaeological evidence, and especially of written documents, is a matter dependent for the most part on careful excavation. In spite of the fact that several sites within the area of so-called ancient "Hittite" civilization have been excavated, it cannot be said that the most fundamental problems presented by the career of this extraordinary people have yet been solved by field investigation. Many years ago the discovery of a treaty of peace between a Hittite sovereign and King Ramses II of Egypt revealed to us the fact that the Hittite monarch was the head of a considerable empire, made up of a number of subject or vassal states. The decipherment

<sup>1</sup> "Oriental Institute Communications," Nos. 2 and 6.

<sup>2</sup> "Oriental Institute Publications," Vol. V.

and interpretation of Hittite cuneiform documents have thrown much more light on the composition of this Hittite Empire. Its capital has been the source of the most important body of historical documents yet disclosed by field investigation. It would seem probable that the capitals of the constituent states would likewise have been carrying on political negotiations and commercial intercourse which would naturally be the subject of records, and that if these records, like those of Boghaz Kõi and Kül Tepe, were made on clay tablets, they might still be found in the ruins of such provincial capitals. At the same time, the sequence of cultural stages, lying as a stratified record in the mounds of Asia Minor and determinable especially by the pottery, had never yet been revealed by any excavation in Hittite territory. For the elucidation of this latter problem it was necessary to find a site where such stratified evidence had never been disturbed by excavation. A mound about 128 miles southeast of Ankara seemed of sufficient size to insure its importance and sufficiently far from Boghaz Kõi to make possible some degree of political independence. As it lay near the village of Alishar, that name has been attached by us to the mound.

The present volume is the first report on the excavation of this mound. The work began under the leadership of Dr. von der Osten in 1927, continuing under the joint control of Dr. von der Osten and Dr. Erich F. Schmidt in the summer of 1928, and has since continued under the sole control of Dr. Schmidt. It seemed wise not to commit the Institute to complete excavation of this mound unless its contents themselves directly confirmed its importance. But we did not wish to confine the preliminary examination to the proverbial "trial trenches" and "trial shafts," since these are very misleading because of their limited area and are very difficult to connect up with later and more extensive clearances. The now generally approved method of stripping level by level, with careful mapping of each level as a whole before the next lower level is attacked, was, however, not at first followed in our operations at Alishar. Nevertheless, a strictly stratigraphic procedure was systematically applied, as it had already been used by Dr. Schmidt in the American Southwest. Plans of the series of clearances reported in this volume will be found on pages 73 and 119, where the reader will observe successions of what we have called "plots," each plot being of sufficient size so that within its limits a careful stratigraphic record could be kept as fast as it was disclosed. Working methods will be found carefully presented in chapters v and viii. A test plot, 6×6 meters in size (described in chap. viii), yielded over 19,000 potsherds, and the rigorously



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scientific record of the levels and strata in which these evidences were found very clearly determined a sequence which was corroborated repeatedly as the other plots were cleared. The pottery sequence occurring in these plots has revealed for the first time the successive cultural stages which we may expect to find in a so-called "Hittite" mound. To the presentation of these evidences this volume is especially devoted.

It should be noted that this report has deliberately refrained from an effort to correlate these newly demonstrated cultural stages with periods disclosed by other excavations, for the reason that these Alishar researches, based on careful observation and record of the stratigraphic evidence, are not directly comparable with the reports of other excavators on other sites. Since this volume was written, however, the excavators were able in 1928, on archaeological evidence alone, to link Period II with the Assyrian mercantile settlement revealed by the cuneiform tablets found at Kül Tepe. Following directly upon the heels of this demonstration, Dr. Schmidt reported the discovery of two cuneiform tablets in the Period II level at Alishar. This ancient city thus becomes the third in Asia Minor to yield up written evidence of this kind, the other two being Boghaz Köi and Kül Tepe. Though the two tablets have not yet arrived from the field and no philological work has yet been done on them, their discovery has made it evident that the Period II level, which may be expected to furnish further written evidence, is obviously the stratum to which we must now devote our attention. It happens that the remains of Period II lie well down the slope of the mound, where they are for the most part exposed, and extend far out from under the later, overlying strata. The next season (summer of 1930) of the Oriental Institute's excavations will therefore be devoted to the complete and systematic clearance of the Period II level, in the hope that it may yield a larger body of written evidence.

JAMES HENRY BREASTED

THE ORIENTAL INSTITUTE  
THE UNIVERSITY OF CHICAGO  
December 18, 1929





## AUTHORS' NOTE

The manuscript for this volume was closed in 1928. It has been possible to insert since then only a few additional remarks or references in the notes. The date of writing is responsible also for the spellings of geographical names, which are rendered as in "Oriental Institute Publications," Volume V. The Turkish government's official list of transliterations may occasion changes in future volumes.

The authorities to whom are due the ancient dates here mentioned are: for Egypt, Breasted, *History of Egypt*; for Assyria and her neighbors, Olmstead, *History of Assyria*; for the Hittites, Forrer in *Mitteilungen der Deutschen Orient-Gesellschaft*, Nos. 61 and 63, and in his *Forschungen*.

The results of our season of 1927 at Alishar have for convenience been grouped into two parts. Part II will include chapters on the disposal of the dead, the human remains (by Professor Fay-Cooper Cole or others, of the University's Department of Anthropology), the coins (by Mr. E. T. Newell), bone objects, metal objects, and seal stones.

It is a pleasure to repeat here our acknowledgments of the kindness of the American embassy and of all the Turkish authorities. Our account of the Expedition's activities, presented in chapter iv, has afforded occasion to mention these gentlemen individually. On the translations given in the Alphabetic Index and Glossary, we enjoyed the co-operation of Velidi Beha Hanum.



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## I

INTRODUCTION: "HITTITE" HISTORY AND  
ARCHAEOLOGY

It is customary to designate as "Hittite" a certain type of monuments—statues, bas-reliefs, bronzes, pottery, and glyptic objects—situated in, or coming especially from, southeastern Asia Minor and North Syria. This designation was given to them at the end of the nineteenth century, when such monuments began to be found in large quantities and scientific interest was directed toward them.<sup>1</sup> Researches since then have shed much new light on this question. Especially important are the discovery at Boghaz Köi by Hugo Winckler in 1906<sup>2</sup> of part of the state archives of the great Hittite Empire of the second millennium B.C.; the deciphering of the Hittite language, as written on the tablets of these archives in Babylonian cuneiform characters, by Friedrich Hrozný in 1915;<sup>3</sup> the publication of the texts by Hans Ehelolf, Hugo H. Figulla, Emil Forrer, Hrozný, Otto Weber, and Ernst F. Weidner;<sup>4</sup> and the valuable translations and interpretations of both texts and languages by Forrer,<sup>5</sup> Johannes Friedrich,<sup>6</sup> Albrecht Götze,<sup>7</sup> and Ferdinand Sommer.<sup>8</sup> In contrast to these important discoveries resulting from historical and philological investigations, the few excavations on "Hittite" sites<sup>9</sup> within the past twenty-five years, although yielding numerous "Hittite" "works of art," have not shed satisfactory light on the "Hittite" question from the point of view of archaeology.

The historical and philological investigations showed that there was in the second millennium B.C. in Asia Minor a great Hittite Empire, controlling during its greatest expansion a large part of Syria, and that this empire was destroyed about 1200 B.C. Furthermore, these investigations showed that there existed in North Syria and in southeastern Asia Minor, after the destruction of the Hittite Empire, a number of "Hittite" states, and that some of these "Hittite" states, especially the ones situated in North Syria, were gradually absorbed later on by the Assyrians. Of the later "Hittite" states in Asia Minor we know very little, due to confusion caused by the invasions of the Cimmerians and the Phrygians. How long these latter peoples too were in Asia Minor, and whether or not they established an empire in its eastern part, we do not know.

<sup>1</sup> Footnotes to this chapter are placed at its end (pp. 15-19). See note 1 there.

Seemingly independent, or nominally independent, small "Hittite" states existed around the Taurus and Anti-Taurus perhaps as late as the Persian conquest of Asia Minor.

But archaeological evidence seems to point also to the existence of a "Hittite" culture in North Syria, northern Mesopotamia, and Asia Minor *previous* to the Hittite Empire of the second millennium B.C. This early culture appears to be related to that of Sumer and of Elam and even perhaps to the predynastic culture in Egypt.<sup>10</sup>

Of the racial affinities of the bearers of "Hittite" culture, which in its main characteristics is the same during all these periods, we have no knowledge whatever, for scientifically obtained skeletal material is quite lacking.<sup>11</sup> The decipherment of the Boghaz Köi archives revealed the use of eight different languages.<sup>12</sup> As to the ethnic or linguistic classification of even the ruling class of the Hittite Empire, the opinions of scholars differ.<sup>13</sup> The Boghaz Köi texts show that the Hittite Empire was in reality a confederation of states with the "Sun," the Great King of Hattushash, at its head. It is possible that these states were formed by the invasion of groups of peoples, at least part of them perhaps of the same origin, coming in various waves to Asia Minor and mingling there with an indigenous population. A certain tribe of them may then gradually have risen to a ruling position over a number of these small principalities and finally have become strong enough to dominate the whole peninsula. To this hypothesis of the rise of the Hittite power in Asia Minor the texts from Boghaz Köi lend some verisimilitude.<sup>14</sup>

The ethnic classification of the "Hittites" of the North Syrian kingdoms also is very uncertain. Though their sites contain remains showing some typical "Hittite" elements, other elements appear which can have no connection with the Hittites of the Empire.

In using the word "Hittite," we must distinguish sharply its ethnical, historical, and archaeological meanings. Ethnically, the Hittites are still very vague to us, and only further investigations and discoveries can make possible their identification. Historically, a sharp distinction must be made between the Hittite Empire in Asia Minor and the "Hittite" states of North Syria and south-eastern Asia Minor. Archaeologically, the word "Hittite" applies to remains of the remarkable and unique culture found in Asia Minor, North Syria, and northern Mesopotamia. It is also often called "Syro-Hittite," "Syro-Cappadocian," or "Cappadocian."

The sources for our knowledge of the history of the Hittites, both of the Empire in Asia Minor and of the states in North Syria, are, besides the texts from the state archives of Boghaz Köi,<sup>15</sup> references in Egyptian,<sup>16</sup> Babylonian,<sup>17</sup> and Assyrian texts<sup>18</sup> and in the Bible.<sup>19</sup> In addition to these there are a number of letters from Tell el-Amarna,<sup>20</sup> also a few Aramaic inscriptions from Senjirli belonging to the period of the North Syrian "Hittite" states.<sup>21</sup> The many inscriptions in "Hittite" hieroglyphs should also be listed here,<sup>22</sup> although their secret has not yet been revealed.<sup>23</sup> If we put all this together, then we have in rough outline the following historical picture.<sup>24</sup>

At the end of the third millennium B.C. a kingdom of Kushshar, a city probably south of the modern Angora, is known to have started a drive eastward. Its climax was reached, after the conquest of a large number of towns, with the sack of a city called Hattushash. To this city later the seat of the kings was shifted from Kushshar.<sup>25</sup> At the beginning of the second millennium B.C. waves of "barbarians" swept over all the ancient civilizations of the Near East. From Babylonian sources we know that at this time (about 1900 B.C.) a Hittite raid brought an end to the famous Amorite dynasty of Babylon.<sup>26</sup> At the same time the Hyksos invaded Egypt and the Kassites descended from the Zagros Mountains to the fertile plains of Shinar, the land of Sumer and Akkad. The rising Hittite Empire may perhaps have come under the overlordship of the same kings that, as the "Hyksos,"<sup>27</sup> conquered Egypt.

Advancing from that chaotic period of the history of the Near East—centuries historically dark on account of lack of documents—we are blinded by suddenly stepping into the full light of history.<sup>28</sup> The day of the Tell el-Amarna letters has dawned.<sup>29</sup> To just this time also belong for the most part the documents from Boghaz Köi.<sup>30</sup> The Near East had attained stability once more. In southern Mesopotamia we find under a Kassite dynasty a new Babylonian empire, but one not so strong and important as the former one under the Amorites. Egypt has expelled the Hyksos and is pushing steadily northward to re-establish its supremacy over the whole of Syria. There it meets another empire, Mitanni, the center of which lies in northern Mesopotamia. From Asia Minor the Hittites appear, pushing steadily southward to Syria. The Egyptian Pharaoh sought and found in the Mitannian kings allies against this advance. But, weakened by constant fighting against the Hittites and against the small but warlike principality of Assur, the Mitannian empire lost its sovereignty and became dependent on the Hittite Great King. It was Shub-



biluliuma (about 1400 B.C.), perhaps the most important Hittite ruler, who accomplished this by marrying his daughter to one of the pretenders to the Mitannian throne.

In the fourteenth century B.C., then, the Hittite Empire dominated, besides Asia Minor, a great part of northern Mesopotamia, and its influence was steadily increasing even in the southern part of Syria. In Egypt ruled Amenhotep IV (better known by his later name, Ikhnaton), a reformer with more interest in religion than in ruling his country. He was himself (already in the second generation) the offspring of a Mitannian princess; for Thutmose IV (1420–1411 B.C.), his grandfather, and Amenhotep III (1411–1375 B.C.), his father, had both married daughters of Mitannian kings.<sup>31</sup> Amenhotep IV himself also married one.<sup>32</sup> The Egyptian priesthood and nobility rallied in opposition to the foreign beliefs and thoughts of their ruler and his followers. Shortly after his death a reaction succeeded in re-establishing the old gods and the old order. In vain the widow of Amenhotep IV or of one of his youthful successors, Tutenkhamon, tried to overcome this national reaction. She wrote to Shubbiluliuma, begging him to send her one of his sons so that he might become her husband and rule Egypt. Shubbiluliuma sent her one, but the young prince was probably assassinated in Syria by partisans of the national Egyptian party.<sup>33</sup>

Harmhab, an old general, was one of the next pharaohs. He reorganized the effeminate troops and prepared for a new conquest of Syria and the northern provinces. Under Seti I came a clash with the Hittites in Syria. The peace that followed was of short duration.<sup>34</sup> Under Ramses II war broke out with renewed violence. A great battle opposite Kadesh was by no means a victory for this personally very brave young Pharaoh.<sup>35</sup> Both parties probably were very glad to end this dispute by a treaty, which was concluded about 1271 B.C. In it both parties are treated on equal terms.<sup>36</sup> Ramses II married the daughter of the Hittite king Hattushilish, the second after Shubbiluliuma.<sup>37</sup>

It was especially necessary for the Hittite ruler to have peace with Egypt, since two other points on the frontiers of his empire were demanding attention. One was in the east. There the principality of Assur was steadily growing; it profited by the quarreling of the great powers. As ally of the Egyptians, it plundered and raided the Mitannian lands after Mitanni had become a Hittite vassal state. The Hittites, in their turn, were allied with Babylon, Assur's natural enemy, which never could nor would forget that Assur had once been



her vassal. Shortly after making his treaty with Egypt, the Hittite Great King helped the Mitannian ruler to repel the Assyrians, who had again taken advantage of the Hittite-Egyptian struggle to enrich themselves. Very diplomatically the Hittite ruler stirred up trouble for Assur on its southern frontier by provoking the Babylonian ruler to an attack.<sup>38</sup> But apparently the raid was unsuccessful and the young Babylonian ruler was killed.<sup>39</sup>

But far weaker strategically was surely the western, with a part of the southern, frontier of the Hittite Empire. We are only now beginning to know something about it. Probably already by this time the peoples on the Aegean islands had started to create that unrest which later caused the destruction of the great Hittite Empire of Asia Minor. Already under Shubbiliuma there seem to have been contacts between the Empire of the Hittites and "Aḫḫijava," the Achaean empire on the Greek mainland, with its capital at Orchomenos.<sup>40</sup> First the kings of "Aḫḫijava" appear to be allies, yet in some respects even vassals, of the Hittite Great King. That is, they were also kings of a region in southern Asia Minor. As kings of "Aḫḫijava" itself they were "brethren," recognized equally as Great Kings. But more and more they seem to have opposed the Hittite rule in Asia Minor, until under Todhaliyas III (1263–1225 B.C.) and Arnuvandas III (1225–1200 B.C.), shortly before the end of the Hittite Empire, they openly defied the orders of the Hittite ruler. An invasion of the west coast of Asia Minor by them was repelled by the Hittites. But their advances in the southern part of the peninsula seem to have been successful to a certain point. Here ends our knowledge of the history of the Hittite Empire. We do not know anything about its last struggle.

The Boghaz Kōi tablets have given us a great deal of invaluable material about the internal politics of the last two or three centuries of the Empire.<sup>41</sup> Numerous religious texts and parts of a law code<sup>42</sup> also survive.

A flood of peoples now swept over Asia Minor; probably pressed by "barbarians" invading the Balkans, bearers of the Aegean and Cretan culture came to Asia Minor and Syria for new homes. At least a part of these peoples helped also to overthrow the Hittite Empire. It was completely destroyed, and the Hittite remnant pushed southeastward to North Syria. There, mingling with other elements, partly from the Arabian Desert, partly of the same peoples which had destroyed the Empire, and partly of the indigenous population, they formed small states. "Hittites" even took part with the "Sea Peoples" in opposing Egypt during the reign of Ramses III (twelfth century B.C.).<sup>43</sup>

A federation of "Hittite" states in North Syria was broken up about 1120 B.C. by Tiglathpileser I of Assur. But he did not conquer Carchemish, their chief center. The further history of these ephemeral "Hittite" states is a record of continual struggle against Assyria with varied success. To this period belongs the rise of the Hebrew kingdom, and from this time dates the mention of the "Hittites" in the Bible. The inevitable end for the Syrian "Hittite" states came in 717 B.C., through Sargon II of Assyria. Carchemish was taken and reduced to the status of a province. The various "Hittite" city states still existed for a time, but now paying tribute to the Assyrian king.<sup>44</sup>

As already stated, our knowledge of the Asia Minor portion of the great Hittite Empire after its fall is very uncertain. There seems to have been a secondary "Hittite" empire, also called the "Moscho-Hittite empire,"<sup>45</sup> with its center at Kaisariyeh; but later on, there seem to have existed only small city states of no political importance whatever, though preserving their cultural and religious traditions until a relatively late time.

The division of "Hittite" history into two principal periods means that a great part of the "Hittite" monuments could not possibly be Hittite, using this designation strictly historically for the great Empire in Asia Minor, also called the "Hittic empire." Outside of a few exceptions, it has been impossible so far to classify any of these monuments more precisely as belonging to a certain definite historical period.<sup>46</sup>

The archaeological remains have commonly been divided into two groups on a geographical rather than historical basis. The one group included monuments in Asia Minor; the other, all in North Syria plus a part of those of southeastern Asia Minor.<sup>47</sup> In this classification of course only the larger stone monuments have been considered. Smaller, but nevertheless sometimes very important, objects, such as bronzes and seals, are hard to classify at all. For the seals G. Contenau has attempted a classification,<sup>48</sup> following the precedent of D. G. Hogarth.<sup>49</sup> A classification for pottery has been attempted by J. L. Myres<sup>50</sup> according to analogies with Mycenaean art. H. de Genouillac too establishes a provisional classification, but states that of course only systematically conducted excavations can produce material which would make a definite chronology possible.<sup>51</sup> This same statement applies to the excellent study by H. Frankfort.<sup>52</sup>

The largest series of "Hittite" monuments has as a characteristic, besides the general type of representation shared more or less with all "Hittite" monu-

ments, hieroglyphic inscriptions which have been called "Hittite." Objects of this group appear only sporadically in western Asia Minor, their main territory being in the southeastern corner of the peninsula, around the Taurus and Anti-Taurus, and in North Syria. A second series is similar in style but lacks the



FIG. 1.—HÜYÜK NEAR ALADJA



FIG. 2.—BOGHAZ KÖI

hieroglyphs. The sites where such monuments are known are in central Asia Minor, North Syria, and northern Mesopotamia.

Systematically conducted excavations of "Hittite" sites in Anatolia have been made so far at Hüyük near Aladja (Fig. 1),<sup>53</sup> at Boghaz Köi (Fig. 2), probably the capital of the Hittite Empire,<sup>54</sup> and at Kül Tepe northeast of Kaisariyeh (Fig. 3).<sup>55</sup> Since the site of Akalan (Fig. 4) near Samsun, where Th. Macridy Bey did some clearance work, showed some pottery fragments similar

to those from Boghaz Köi, it too may be considered as an Anatolian "Hittite" site.<sup>56</sup> The *sondages* of E. Chantre at Orta Hüyük (Fig. 5) near the village of Dedik on the Konak Su, and at Aivalü (Fig. 6), may also be mentioned here.<sup>57</sup>

In North Syria also, three sites have been partly excavated: Senjirli (Fig. 7), the ancient Samal;<sup>58</sup> Sakje Geuzi (Fig. 8);<sup>59</sup> and Jerabis, the ancient Carchemish (Fig. 9), chief center of the later "Hittite" states.<sup>60</sup> Another partly excavated site, situated in northern Mesopotamia, must also be mentioned in



FIG. 3.—KÜL TEPE

From Hrozný in *Syria*, Vol. VIII (1927), Plate I, 1.

this connection. It is Tell Halaf,<sup>61</sup> not far from the station of Ras el-<sup>c</sup>Ain on the Baghdad railroad.<sup>62</sup>

At Senjirli the German excavators found "Hittite" sculptures in four different strata, representing four periods; while in the fifth, or topmost, stratum they found remains of Roman and Byzantine times. The fourth stratum contained also a stela of Esarhaddon of Assyria (680-669 B.C.).<sup>63</sup> For the last two strata, therefore, it is possible to fix a fairly accurate date. In the publication R. Koldewey has given a survey of the history of the city.<sup>64</sup> Of the five strata, the two just mentioned furnish a basis for the chronology of the others. The fifth and latest stratum, of the Byzantine period, is dated by coins found in it.<sup>65</sup> An inscription of Panammu, king of Samal, connects the third stratum





FIG. 4.—AKALAN



FIG. 5.—THREE HÜYÜKS NEAR DEDIK. THE MIDDLE ONE IS ORTA HÜYÜK



with the time of Tiglathpileser IV of Assyria (746–728 B.C.). This period in the history of Samal is fairly well known from such inscriptions in Aramaic found at Senjirli in the third and fourth strata.<sup>66</sup>



FIG. 6.—AIVALÜ



FIG. 7.—SENJIRLI, ON THE SITE OF ANCIENT SAMAL, CAPITAL OF THE NORTH SYRIAN JUDAH  
From A. T. Olmstead, *History of Assyria*, Fig. 72. Copyright, 1923, by Charles Scribner's Sons.  
By permission of the publishers.

To the third stratum also belongs the so-called "lower palace." The rubbish layer between it and the topmost stratum of the hillock (Samal V), representing the interval of over 1,000 years between Tiglathpileser IV and the Byzantine period, is 2.50 meters thick. This layer, like all the rest of the hillock, consists of

remains of houses, etc., a sort of débris which is sometimes assumed to accumulate at a fairly uniform rate. Between the level of the lower palace and that of the citadel wall belonging to the second period (Samal II) there is a difference of 6 meters. But Koldewey points out that it would be dangerous to accept an interval of 2,000 years or more between these two periods, proportionate to the depth of 6 meters. For this statement he gives, in addition to some technical objections, the judgment of O. Puchstein.<sup>67</sup> The latter, basing his



FIG. 8.—SAKJE GEUZI. MOUND A, JOBBA EYUK, FROM THE WEST

From Garstang in the *Liverpool Annals of Archaeology and Anthropology*, Vol. I (1908), Plate XXXIV, 1.

opinion on stylistic investigations, gives to the sculptures of this period an approximate date of tenth century B.C. Koldewey's final statement is that one can accept as an improbable maximum an interval of 2,000 years and as a probable minimum, after allowing for the technical factors referred to above, an interval of 500 years. Such authorities on this subject as Eduard Meyer and Edmond Pottier<sup>68</sup> are inclined to accept Koldewey's minimum period; they refer this style to an undetermined date in the second millennium B.C. Hogarth seems to prefer a dating closer to that of Puchstein.<sup>69</sup>

The dado slabs of Periods I–III show enough similarity in type and representation to prove their affinity.<sup>70</sup> The most striking of the sculptures found at Senjirli are the lions used as decorations at the gates; the characteristic differences of the various periods appear perhaps best in them. There have been found approximately twenty of these lions, some well preserved, some in frag-



FIG. 9.—CARCHEMISH. CITADEL MOUND FROM NORTHWEST

From *Carchemish: Report on the Excavations at Djerabis on Behalf of the British Museum, Part I* (London, 1914), Frontispiece, a.

ments. For my part, I find it very hard to attribute all of them to only four different periods. There must, indeed, have been somewhere a transition style; even the dado slabs are too varied in their execution and conception. Whether there may have been re-worked dado slabs also from such a transition period we shall probably never know.<sup>71</sup> The excavations have brought nothing of this kind to light, and with the thorough searching of the core of the hillock by the German scholars it is not likely that anything has been overlooked. Nevertheless, in the series of the second period there seem to be slabs which are of an

older style belonging between Samal I and Samal II and apparently re-used.<sup>72</sup> A remarkable feature of this site is that no hieroglyphic inscriptions have been found.

Not far from Samal is situated Sakje Geuzi. Here monuments of a later period have been found, perhaps contemporaneous with Samal IV. As in Samal III and IV, a strong Assyrian influence is to be recognized. The short, crude figures resemble the degenerate type of Samal IV.<sup>73</sup> The famous lion hunt, with figures done in the flat, well-proportioned manner of Assyrian reliefs,<sup>74</sup> shows rather a tendency toward Samal III.

In Carchemish also, reliefs of various periods have come to light. An older period resembles Samal II; two or three later ones are similar to Samal III and IV, but include hieroglyphic inscriptions.<sup>75</sup>

From Tell Halaf also, a full report on which is still lacking, we know of two types of sculptures, one approaching Samal I and one Samal II(?).<sup>76</sup>

Kül Tepe has produced only one stone sculpture of fairly large size, so far as I know. The final publication of the recent excavations has not yet appeared.<sup>77</sup>

The campaigns at Hüyük too have not been published.<sup>78</sup> But, as far as one can see, at least two different styles of dado slabs may be recognized.<sup>79</sup> The problem here is made more complicated still through the presence of Phrygian inscriptions<sup>80</sup> and of one block with the remains of three hieroglyphs.<sup>81</sup>

Still more puzzling are the sculptures found at Boghaz Köi<sup>82</sup> and Yazili Kaya<sup>83</sup> in relation to the ones at Samal or at any other "Hittite" site. The type of representation is the same as at Samal or any other above-named site, with the exception that here as in Hüyük there is no Assyrian influence whatever. The big gateway sphinxes at Hüyük, one of which has now been overthrown and broken, are supposed to show Egyptian influence.<sup>84</sup> The monuments at Boghaz Köi and Yazili Kaya are superior in technical execution to any other works of art of the "Hittite" culture. At Boghaz Köi a large rock-carved hieroglyphic inscription has been found,<sup>85</sup> also a stone<sup>86</sup> which seems to have been a socket or small altar with hieroglyphs in connection with sculptures. The sculptures from the kings', lion, and sphinx gates are uninscribed.<sup>87</sup> But in Yazili Kaya the very well executed rock carvings, similar in style to those at Boghaz Köi, show actual hieroglyphs in four places.<sup>88</sup> The remaining signs appearing before deities are probably to be considered as mere symbols. These sculptures with those at Boghaz Köi form a group by themselves.<sup>89</sup>

In spite of all the similarity between the Asia Minor "Hittite" monuments



and those from North Syria (including the Taurus region) and northern Mesopotamia, there are some factors which suggest a general separation of these two groups. The Asia Minor "Hittite" culture seems to have centered in Cappadocia. Besides the distinctive features of the monumental sculptures from there, the pottery and glyptic work too show a great difference from the types so far known from Syrian sites.<sup>90</sup> The pottery coming from Cappadocia shows many affiliations with Troy.<sup>91</sup> Architectural remains of all the "Hittite" sites are relatively well studied. In that respect also there seems to be a difference between Asia Minor and the remaining territory of the "Hittites,"



FIG. 10.—GIAUR KALESSI

although the Asia Minor sites have by no means been excavated completely, so that it is still uncertain whether the *hilani* may not perhaps occur there also.<sup>92</sup> The building remains at Boghaz Köi seem to point to an affiliation with the West rather than with the East.

With the foregoing background of facts and problems, the Oriental Institute undertook work in Asia Minor. A preliminary exploration during 1926 in the Küzül Irmak basin, the central part of Anatolia, had resulted in the discovery and investigation of approximately seventy ancient sites.<sup>93</sup> Most of them had the form of a *hüyük*, or mound, without any traces of wall or building remains, but all covered with thousands and thousands of pottery fragments from the various civilizations which had flourished in Asia Minor from the Neolithic period down to Osmanli times. Only a few sites, mostly very large ones, in-



cluding Boghaz Köi, the city on the Kerkenes Dagh,<sup>94</sup> and a site near Köprü Köi,<sup>95</sup> showed the remains of ancient city walls and traces of buildings. Also at Giaur Kalessi (Fig. 10), the "acropolis" of a large ancient city (probably Kushshar) south of Angora, both wall remains and sculptures are to be seen.<sup>96</sup>

For collecting the most necessary archaeological material from Cappadocia, a *hüyük* seemed the most favorable type of ancient site to excavate. These relatively smaller sites were probably inhabited during all the different periods of the colorful Anatolian history, and superposition of successive strata promised valuable information as to the relative chronology of pottery and other small objects to be found there. On the other hand, it seemed advisable not to choose one of the many smaller *hüyüks*, since these had probably been only small towns or even villages, but rather a mound which according to its dimensions, form, and situation would probably have been the center of one of the many small principalities into which Asia Minor was divided in the second millennium B.C. Furthermore, it seemed advisable to choose a site not too far away from the probable capital of the Hittite Empire. All these features were to be found in a large *hüyük* near the village of Alishar which had been discovered during the explorations of 1926.<sup>97</sup>

## NOTES ON CHAPTER I

1. E.g., by A. H. Sayce in *Proceedings of the Society of Biblical Archaeology*, XIX (1897), 301. On the history of these first investigations, cf. Eduard Meyer, *Reich und Kultur der Chetiter* (Berlin, 1914); A. E. Cowley, *The Hittites* (London, 1920); and Sayce, *The Hittites; the Story of a Forgotten Empire* (rev. and enlarged ed.; London, 1926). See also G. Contenau, *Éléments de bibliographie hittite* (Paris, 1922). In both this and the following notes, no attempt is made at exhaustiveness.

2. *Orientalistische Literaturzeitung* (hereafter abbreviated to *OLZ*), IX (1906), 411-12, 607-9, 621-34; *Mitteilungen der Deutschen Orient-Gesellschaft* (hereafter abbreviated to *MDOG*), No. 35 (1907), pp. 1-59.

3. *MDOG*, No. 56 (1915), pp. 17-50; *Die Sprache der Hethiter* (Leipzig, 1917).

4. Begun as *Keilschrifttexte aus Boghazköi*, 6 parts forming *Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft* (hereafter abbreviated to *WVDOG*), Nos. 30 and 36 (Leipzig, 1916-21); continued by the Vorderasiatische Abteilung der Staatlichen Museen zu Berlin under the title *Keilschrifturkunden aus Boghazköi* (1921-). The foregoing texts are in Berlin; for London texts see *Hittite Texts in the Cuneiform Character from Tablets in the British Museum* (London, 1920).

5. *Die Boghazköi-Texte in Umschrift*, forming *WVDOG*, Nos. 41-42 (Leipzig, 1922-26); *Forschungen*, I, Heft 1, and II, Heft 1 (Berlin, 1926); "Die Inschriften und Sprachen des Hatti-Reiches," *Zeitschrift der Deutschen Morgenländischen Gesellschaft* (hereafter abbreviated to *ZDMG*), LXXVI (1922), 174-269; other articles in *MDOG*, No. 61 (1921), pp. 20-39, and No. 63 (1924), pp. 1-22, and in *OLZ*, XXVII (1924), 113-18.

6. In *ZDMG*, LXXVI (1922), 153-73; "Aus dem hethitischen Schrifttum," *Der Alte Orient*, XXIV, Heft 3, and XXV, Heft 2 (both 1925); "Staatsverträge des Hatti-Reiches in hethitischer Sprache," I (*Hethitische Texte in Umschrift mit Übersetzung und Erläuterungen*, hrsg. von F. Sommer, Heft 2),

*Mitteilungen der Vorderasiatisch-ägyptischen Gesellschaft* (hereafter abbreviated to *MVAG*), XXXI, Heft 1 (Leipzig, 1926).

7. "Kleinasien zur Hethiterzeit," *Orient und Antike*, I (Heidelberg, 1924); *Ausgewählte hethitische Texte historischen und juristischen Inhalts* (Bonn, 1925); "Hattušiliš" (*Hethitische Texte in Umschrift...*, hrsg. von F. Sommer, Heft 1), *MVAG*, XXIX, Heft 3 (Leipzig, 1925). Also articles in *Klio*, XIX (1925), 347-50, and in *Zeitschrift für Assyriologie* (hereafter abbreviated to *ZA*), XXXVI (1925), 266-68 and 305-8.

8. "Hethitisches," *Boghazköi-Studien*, hrsg. von O. Weber, Hefte 4 and 7 (Leipzig, 1920-22); and, with Ehelolf, "Das hethitische Ritual des Papānikri von Komona," *ibid.*, Heft 10 (Leipzig, 1924). Sommer also edited *Hethitische Texte in Umschrift mit Übersetzung und Erläuterungen* (cf. nn. 6 and 7), and is editing, with Ehelolf, *Kleinasiatische Forschungen* (1928—).

9. See nn. 53-62, inclusive.

10. Cf. H. H. von der Osten in *American Journal of Archaeology*, 2d series, XXX (1926), 410 ff.

11. The late Felix von Luschan possessed a collection of such material from Asia Minor; but, as far as I am aware, it was never published, nor is its present location known. Cf. von Luschan in *Journal of the Royal Anthropological Institute of Great Britain and Ireland*, XLI (1911), 221-44.

12. Forrer, "Die acht Sprachen der Boghazköi-Inschriften," *Sitzungsberichte der Preussischen Akademie der Wissenschaften*, 1919<sup>2</sup>, pp. 1029-41; cf. *ZDMG*, LXXVI, 187-88 and 199.

13. Cf. Hrozný, *Die Sprache der Hethiter* (Leipzig, 1917), especially p. ix; Carl J. S. Marstrander, "Caractère indoeuropéen de la langue hittite," *Skrifter utgit av Videnskapsselskapet i Kristiania*, 1918 (II. Historisk-filosofisk klasse. No. 2. [viii], 172 pp.); Franz Böhl in *Theol. Tijdschrift*, L (1916), 66-71 and 305; Weidner, *Studien zur hethitischen Sprachwissenschaft*, I (Leipzig, 1917); M. Bloomfield in *Journal of the American Oriental Society*, XLI (1921), 195-209; J. D. Prince, *ibid.*, pp. 210-24; and E. H. Sturtevant in *Language*, II (1926), 25-34.

14. Cf. n. 25.

15. See nn. 4-8, inclusive.

16. J. H. Breasted, *Ancient Records of Egypt* (Chicago, 1906-7; hereafter abbreviated to *BAR*), references indexed in Vol. V; Contenau, *op. cit.*, pp. 2-3.

17. L. W. King, *Chronicles Concerning Early Babylonian Kings* (London, 1907), II, 22.

18. Contenau, *op. cit.*, p. 3; A. T. Olmstead, *History of Assyria* (New York, 1923), pp. 35-59; D. D. Luckenbill, *Ancient Records of Assyria and Babylonia*, I-II (1926-27), *passim* (cf. Index s. v. Hittite).

19. Contenau, *op. cit.*, pp. 1-2; D. G. Hogarth, *Kings of the Hittites* (London, 1926), pp. 1-2.

20. *Die El-Amarna Tafeln*, mit Einleitung und Erläuterungen hrsg. von J. A. Knudtzon. Anmerkungen und Register bearb. von Otto Weber und Erich Ebeling (Leipzig, 1915. 2 vols.); Contenau, *op. cit.*, pp. 4-5.

21. Kgl. Museen zu Berlin, *Mitteilungen aus den orientalischen Sammlungen*, Hefte 11-14: Orient-Comité, *Ausgrabungen in Sendschirli* (Berlin, 1893-1911; hereafter abbreviated to *Sendschirli*), I and IV; Olmstead, *op. cit.*, pp. 184-88.

22. L. Messerschmidt, "Corpus inscriptionum Hettitarum" in *MVAG*, V (1900), VII (1902), and XI (1906); Benson B. Charles, "Hittite Inscriptions," *Travels and Studies in the Nearer East*, I, Part II (Ithaca, New York, 1911); *Carchemish: Report on the Excavations at Djerabis on Behalf of the British Museum* (hereafter abbreviated to *Carchemish*), Parts I-II (1914-21); Walter Andrae, *Hethitische Inschriften auf Bleistreifen aus Assur*, forming *WVDOG*, No. 46 (Leipzig, 1924); J. Lewy in *Archiv für Orientforschung*, III (1926), 7-8.

23. On attempts at decipherment, cf. Contenau, *op. cit.*, pp. 8-12.

24. Since the following account was written, there have appeared also Götze's "Das Hethiterreich," *Der Alte Orient*, XXVII, Heft 2 (Leipzig, 1928), and the 2d (fully re-written) ed. of Eduard Meyer's great *Geschichte des Altertums*, 2. Bd., 1. Abt.: *Die Zeit der ägyptischen Grossmacht* (Stuttgart and Berlin, 1928).

25. Friedrich, "Aus dem hethitischen Schrifttum" (cf. n. 6), I, 5-7; Forrer in *MDOG*, No. 61, pp. 29-30.
26. King, *loc. cit.*
27. The name is probably an Egyptian phrase meaning "rulers of the deserts," instead of "shepherd kings" as Manetho had it. Cf., e.g., Weigall, *A History of the Pharaohs* (New York, 1925-), II, 181.
28. Olmstead, *op. cit.*, p. 33.
29. Cf. n. 20.
30. Cf. nn. 4-8, inclusive.
31. Olmstead, *op. cit.*, pp. 38-39.
32. *BAR*, II, § 866, n. h.
33. Forrer in *MDOG*, No. 61, p. 32; Friedrich, *op. cit.*, pp. 12-13; Forrer, *Forschungen*, II, 22-32; H. Zimmern and Friedrich together in *ZA*, XXXV (1924), 37-42.
34. Olmstead, *op. cit.*, p. 45.
35. Breasted, *The Battle of Kadesh* (Chicago, 1903); *BAR*, III, §§ 298-351; G. Roeder, "Ägypter und Hethiter," *Der Alte Orient*, XX (1919); J. A. Wilson in *American Journal of Semitic Languages* (hereafter abbreviated to *AJSL*), XLIII (1927), 266-87.
36. *BAR*, III, §§ 367-91; Bruno Meissner, "Der Staatsvertrag Ramses' II. von Ägypten und Hattusilis von Hatti in akkadischer Fassung," *Sitzungsberichte der Preussischen Akademie der Wissenschaften*, 1917<sup>1</sup>, pp. 282-95; S. Langdon and A. H. Gardiner in *Journal of Egyptian Archaeology*, VI (1920), 179-205.
37. The "Marriage Stela" at Abu Simbel in Nubia is treated in *BAR*, III, §§ 415-24. With its more recently discovered parallels, it has since been published by C. Kuentz in *Annales du Service des antiquités de l'Égypte*, XXV (1925), 181-238.
38. Friedrich, *op. cit.*, p. 27.
39. Olmstead, *op. cit.*, pp. 51-52.
40. For this whole question see Forrer in *MDOG*, No. 63 (1924), pp. 1-22, and his *Forschungen*, I, Heft 2; Sayce in *Journal of Hellenic Studies*, XLV (1925), 161-63; G. Poisson, "Tantale, roi des Hittites," *Revue Archéologique*, 5. série, XXII (1925), 75-94. Objections by Friedrich in *Kleinasiatische Forschungen*, I (1928), 87-107, are answered by Forrer, *ibid.*, pp. 252-72, and in his article on "Aḥḥijavá" in the *Reallexicon der Assyriologie* (1928).
41. Forrer in *MDOG*, No. 61, pp. 28-33, and No. 63, pp. 1-22, also in his *Forschungen*; Friedrich, "Aus dem hethitischen Schrifttum" (cf. n. 6), I, 5-27.
42. H. Zimmern and J. Friedrich, "Hethitische Gesetze aus dem Staatsarchiv von Boghazköi," *Der Alte Orient*, XXIII, Heft 2 (1922), with "Nachträge" by Friedrich; Hrozný, *Code hittite provenant de l'Asie Mineure* (Paris, 1922).
43. *BAR*, IV, § 129.
44. Olmstead, *op. cit.*, chaps. xi-xvii; Hogarth, *op. cit.*
45. Sayce, *The Hittites; the Story of a Forgotten Empire*, p. 208.
46. Meyer, *op. cit.*; Pottier, "L'art hittite," in *Syria*, Vols. I-II and V (1920-24); Hogarth, *op. cit.*
47. Cf. Pottier in *Syria*, I, 180.
48. *La glyptique syro-hittite* (Paris, 1922).
49. *Hittite Seals, with Particular Reference to the Ashmolean Collection* (Oxford, 1920).
50. In *Journal of the Royal Anthropol. Inst.*, XXXIII (1903), 377-90.
51. *Céramique cappadocienne* (Musée du Louvre, Dépt. des antiquités orientales, *Série archéologique*, I-II [Paris, 1926]), especially I, 61.
52. *Studies in Early Pottery of the Near East* (London, 1924-27).
53. Earlier *sondages* here are described by Charles Texier, *Description de l'Asie Mineure, faite par ordre du gouvernement français de 1833 à 1837*, 3 vols. (Paris, 1839-49), and by E. Chantre, *Mission en*



*Cappadoce* (Paris, 1898). On the excavations, see Th. Macridy Bey, "La porte des sphinx à Euyuk," *MVAG*, XII (1908), 177-205. The definitive publication of his work, which will surely furnish invaluable material for further studies, will soon appear, as Macridy Bey told me in the summer of 1926 at Stambul.

54. O. Puchstein unter Mitwirkung von H. Kohl und D. Krencker, *Boghasköi, die Bauwerke*, constituting *WVDOG*, No. 19 (Leipzig, 1912).

55. Chantre, *op. cit.*; Hugo Grothe, *Meine Vorderasiens Expedition 1906 und 1907* (Leipzig, 1911), I, cclxxx-cclxxxii; Hrozný in *Syria*, VIII (1927), 1-12.

56. Macridy Bey, "Une citadelle archaïque du Pont," *MVAG*, XII (1907), 167-75, with 17 plates.

57. Chantre, *op. cit.*

58. *Sendschirli*, I—. Four parts (1893-1911) have so far appeared. The publication of the smaller objects found during the excavations is in preparation.

59. John Garstang in the Liverpool *Annals of Archaeology and Anthropology* (hereafter abbreviated to *LAAA*), I (1908), 97-117 and Plates XXXIII-XLIX, and V (1913), 63-72.

60. *Carchemish*, I—. Two parts (1914-21) have so far appeared.

61. Max von Oppenheim, "Der Tell Halaf und die verschleierte Göttin," *Der Alte Orient*, X (1908), 1-44. A complete report on this very important excavation is still lacking. In recent years a few sculptures from there have been published in *Syria*, V (1924), Plates XXIX-XXX; Hogarth, *op. cit.*, Figs. 4, 49, and 50; and the *Illustrated London News*, November 27, 1926.

62. Since the establishment of the French mandate over Syria, *sondages* have been made at various "Hittite" sites. Unfortunately, no complete reports have been published, though short accounts may be found in the periodical *Syria*. It is much to be regretted that the material is not yet available for general study. Sites far to the south also, such as Beisan and Megiddo, have yielded "Hittite" material.

63. *Sendschirli*, I, 11-43, and Plates I-V.

64. *Ibid.*, II, 172-78. See also Friedrich Wachtsmuth, "Die Baugeschichte von Sendschirli (Šamal)," *Jahrbuch des Deutschen Archäologischen Instituts*, XXXVIII/XXXIX (1923-24), 158-69.

65. *Ibid.*, II, 173.

66. *Ibid.*, I and IV; Olmstead, *op. cit.*, chap. xv.

67. *Pseudohethitische Kunst* (Berlin, 1890).

68. Meyer, *op. cit.*, p. 59; Pottier in *Syria*, II (1921), 23.

69. Hogarth, *op. cit.*, p. 15.

70. *Sendschirli*, III-IV, Plates XXXIV-XLV, LXI-LXII, and LVIII-LIX.

71. *Ibid.*, IV, 242.

72. Cf. *ibid.*, III, Plate XXXVIII.

73. Cf. *LAAA*, I (1908), especially Plates XL-XLI, with *Sendschirli*, IV, Plates LVIII-LIX.

74. Meyer, *op. cit.*, Plate VIII; *Sendschirli*, IV, Plates LXI-LXII. Cf. the Assyrian relief of Sargon II in Olmstead, *op. cit.*, Fig. 90.

75. Cf. *Carchemish*, I, especially Plates B7-8. Since this account was written, there has appeared also a paper by A. E. Cowley, "The Date of the Hittite Hieroglyphic Inscriptions of Carchemish," in *Proceedings of the British Academy*, Vol. XIII (London, 1928).

76. Cf. Hogarth, *op. cit.*, Figs. 49 and 50.

77. Cf. n. 55.

78. Cf. n. 53.

79. Meyer, *op. cit.*, Figs. 63-65.

80. Two stone slabs with Phrygian inscriptions are in the National Museum at Stambul; cf. Chantre, *op. cit.* Two more such inscriptions occur on objects still at Hüyük, a dado slab and the body of a huge stone lion, respectively; cf. von der Osten, "Explorations in Hittite Asia Minor," *AJSL*, XLIII (1927), 107, reprinted as University of Chicago, "Oriental Institute Communications" (hereafter abbreviated to *OIC*), No. 2, p. 35, and *Explorations in Central Anatolia, Season of 1926*, constituting University of Chicago, "Oriental Institute Publications" (hereafter abbreviated to *OIP*), V, 98 and Plate VII.

81. Chantre, *op. cit.* Hogarth, *op. cit.*, p. 49, mentions a recently uncovered block with two script characters. Could it perhaps be the same one which Chantre saw?
82. Puchstein, *Boghasköi*, Plates 17-19 and 23-24; a gateway sphinx and two blocks with reliefs, now in the Stambul Museum (cf. nn. 87 and 86); the head of a god in the round, Meyer, *op. cit.*, Plate X and pp. 107-8. See *ibid.*, p. 161, for mention of other pieces.
83. Drawings and map: G. Perrot and Ch. Chipiez, *Histoire de l'art*, IV (Paris, 1887), Plate VIII, Figs. 309-21, and pp. 623-56. Photographs: Garstang, *The Land of the Hittites* (London, 1910), Plates LXIII-LXXI; von der Osten in *AJSL*, XLIII (= *OIC*, No. 2), Figs. 41-47, and in detail in *OIP*, V, Figs. 185-87 and Plates X-XXII. Photographs from casts in the Berlin Museum: K. Humann and O. Puchstein, *Reisen in Kleinasien und Nordsyrien* (Berlin, 1890); Meyer, *op. cit.*, Figs. 67-68; Weber, *Die Kunst der Hethiter* (cover title, *Hethitische Kunst*), published as *Orbis Pictus*, IX (Berlin, [1921?]), Plates 13, 16, and 32.
84. Meyer, *op. cit.*, p. 24.
85. Winckler in *OLZ*, IX (1906), 628; Charles, "Hittite Inscriptions" (cf. n. 22), pp. 7-10, Plate III, and Figs. 7-9.
86. In the National Museum at Stambul.
87. On the wing of the sphinx in the National Museum is a small graffito of a few signs. The sphinx was shown to me in 1926 by the courtesy of Essad Bey.
88. Before Nos. 48 and 49 (sketched in Meyer, *op. cit.*, p. 134), a "cartouche" over the outstretched hand of No. 65, a similar "cartouche" alone as No. 80 (a cast of this is in Stambul), and a different "cartouche" behind No. 82. The first two are in the great court, the last two in the inner court. See *AJSL*, XLIII, 115-16 (= *OIC*, No. 2, pp. 43-44), and *OIP*, V, 118-19 and Plates XVII, XXI, and XXII, in which the last three are illustrated. The "cartouches" are supposed to contain the names of kings; cf. Meyer, *op. cit.*, pp. 31-35.
89. The classification and chronology of the monuments bearing hieroglyphic inscriptions are discussed by von der Osten, "Four Sculptures from Marash," *Metropolitan Museum Studies*, Vol. II, Part I (New York, 1929).
90. Cf. the systematic and very valuable study of pottery by C. L. Woolley in his "Hittite Burial Customs," *LAAA*, VI (1914), 87-98; see also Frankfort, *op. cit.*
91. Cf. Hubert Schmidt's publication of the Trojan pottery in W. Dörpfeld, *Troja und Ilion* (Athens, 1902), pp. 243-319.
92. Cf. Valentin K. Müller, "Die monumentale Architektur der Chatti von Boghaz-köi," *Mitteilungen des Deutschen Archäol. Instituts, Athenische Abteilung*, XXXXII (1917), 99-170.
93. See reports in *OIC*, No. 2, and *OIP*, Vol. V. In the same year (1926) Forrer and Götze both visited Asia Minor and found many additional sites. See *MDOG*, No. 65 (1927), pp. 27-43, and *Archiv für Orientforschung*, IV (1927), 24-26, respectively.
94. Cf. von der Osten, "An Unnoticed Ancient Metropolis of Asia Minor," *Geographical Review*, XVIII (1928), 83-92 (there called "Kevkenes Dagh"), and Erich F. Schmidt, "Test Excavations in the City on Kerkenes Dagh," *AJSL*, XLV (1929), 221-74.
95. Forrer in *MDOG*, No. 65, p. 37.
96. Perrot and Chipiez, *op. cit.*, IV, 714-21; *AJSL*, XLIII, 150-51 (= *OIC*, No. 2, pp. 78-79); *OIP*, V, 142 and Plate XXIV.
97. *AJSL*, XLIII, 105-6 (= *OIC*, No. 2, pp. 33-34); *OIP*, V, 89.



## II

## THE ENVIRONMENT OF THE ALISHAR HÜYÜK

The Alishar *hüyük* is situated approximately 45 kilometers southeast of Yozgad, the seat of government of the *vilayet* of Yozgad (now called Bozuk). This *vilayet* is situated in turn in the center of the highland of Anatolia. It is bounded on the west by the *vilayet* of Angora (approximately 175 kilometers



FIG. 11.—THE KÜZÜL IRMAK NEAR YAKHSI HAN

west of Yozgad), on the north by the *vilayet* of Chorum (approximately 85 kilometers northwest of Yozgad), on the northeast by the *vilayet* of Tokat (approximately 170 kilometers northeast of Yozgad), on the east by the *vilayet* of Sivas (approximately 200 kilometers east of Yozgad), and on the south by the *vilayets* of Kaisariyeh and Kirshehir (150 and 100 kilometers southeast and southwest of Yozgad). The city of Yozgad lies 220 kilometers south of Samsun and the shore of the Black Sea and 325 kilometers north of Mersine and the shore of the Mediterranean.

The *vilayet* of Yozgad is itself divided into four *kaimakamliks* or counties. In the northwest lies the *kaimakamlık* of Köhne, in the east lies the *kaimakamlık* of Ak Dagh Maden, in the south lies the *kaimakamlık* of Boghazlayan, and in the west lies the *kaimakamlık* of which Yozgad itself is the administrative center.

The heart of Anatolia consists of a large territory nearly surrounded by the Küzül Irmak, the largest river in the peninsula of Asia Minor (Fig. 11). It includes five main geographical units. First are the mountain chains bordering the Küzül Irmak on the southeast, south, and west. They form sometimes fertile plateaus sloping down to the river (e.g., south of Kirshehir), sometimes nar-

row, picturesque defiles with steep, rocky slopes (e.g., near Köprü Köi); or again they merge into arid plains through which the Küzül Irmak flows (e.g., between Bugda and Kula). The second unit is the territory of the Delidje-Konak Su with its many tributaries (Map 1). The third consists of the mountains dividing the basin of the Küzül Irmak from that of the Yeshil Irmak. The fourth unit is the Yeshil Irmak basin, including its large tributary, the Germili Su, which joins it north of Amasia near Sunisa. There the Yeshil Irmak enters a broad and fertile alluvial plain, to flow finally into the Black Sea (Kara Deniz) 80 kilometers east of the mouth of the Küzül Irmak. The fifth and last unit is formed by the southern border of the Black Sea, where high mountains rise with large woods, imposing rock formations, and rich meadows.<sup>1</sup>

The Bozuk *vilayet* consists of nearly the whole Delidje-Konak Su basin. The parts excepted are its northern reach from Cherekli to Kula, the fertile plain extending east and southeast from Sungurlu to Boghaz Köi, the Malya Chölü, and the southern part of the Karajerli or Kara Su.

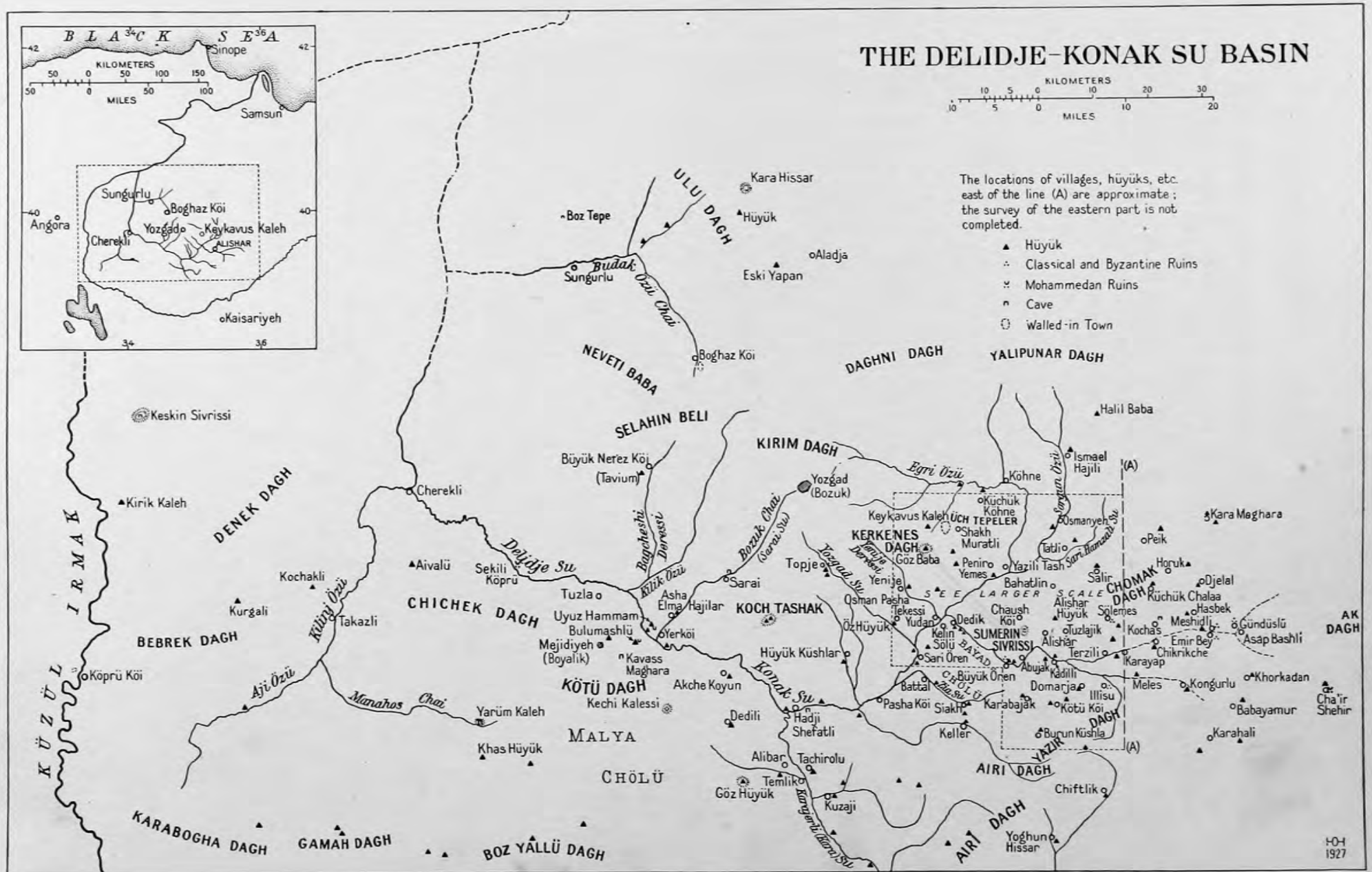
The Konak Su originates west of Ak Dagħ Maden, being formed by many small streams coming down from the western slopes and extensions of the Ak Dagħ (White Mountain) complex. Its source lies about 60 kilometers north of the Küzül Irmak valley; thence it flows nearly parallel to this river in a general westerly, then northwesterly direction, finally bending sharply northward near Cherekli and joining the Küzül Irmak near Kula. In the south and west the Delidje-Konak Su basin is divided from the Küzül Irmak valley by mountain complexes. These include the Malya Chölü, which extends from Küzül Tepe northward almost to the Delidje Su valley and from the east slopes of the Chickek Dagħ to the Karajerli (Kara) Su valley. The northern limits of the Konak Su basin are the mountain chains north of Yozgad on whose west slopes Boghaz Köi is situated. These divide it from the plain around Aladja, with the famous site of Hüyük<sup>2</sup> at its northern end—a plain which belongs to the Yeshil Irmak basin. In the northeast the Dagħni and Yalipunar Dagħ form the frontier toward the Yeshil Irmak basin; and in the east the Ak Dagħ, with its many extensions, completes the list of barriers.

This large territory drained by the Delidje-Konak Su is subdivided by nature into a western and an eastern part. In the eastern part is situated the

<sup>1</sup> On the geography of Asia Minor there is a good bibliography, with complete list of maps, by Ulrich Frey, "Das Hochland von Anatolien," *Mitteilungen der Geographischen Gesellschaft in München*, XVIII (1925), 203-79.

<sup>2</sup> Cf. p. 17, n. 53.

MAP 1



THE DELIDJE-KONAK SU BASIN. INSERT: CENTRAL ASIA MINOR

Alishar *hüyük*. The division occurs at the narrow defile of the river between the mountains south of Yozgad and those limiting the Malya Chölü on the north. The river enters the defile west of Hadji Shefatli after having received the Karajerli or Kara Su from the south. This picturesque defile often forms a deep gorge between steep rock formations. The river is called Konak Su until after it emerges from the defile near Yerköi; below that point it is called the Delidje Su. The name Delidje ("crazy") is due to its meandering course through the broad and arid, sometimes salty, plain which extends far to the west from Yerköi. This plain seems never to have been thickly populated. The modern villages are few, and no remains of ancient ones are found except near Yerköi itself. The situation on the north and east slopes of the Chichek Dag and the south slopes of the mountains west of Yozgad which bound this plain is similar.

The Chichek Dag slopes down on the south toward the Manahos Chai, which rises on the southeast slopes of the same mountain. Twelve kilometers south of Takazli it joins the Kilinj Özü. The latter originates as the Aji Özü, formed by a number of small streams coming from the southeast slopes of the Bebrek Dag and the north slopes of the Karabogha Dag. It finally flows into the Delidje Su north of Cherekli. On the north slopes of the Karabogha Dag are situated a number of *hüyüks*,<sup>1</sup> and on the Kilinj Özü, shortly before the Manahos Chai joins it, a small *hüyük* is located. Finally, east of the Kilinj Özü, a few kilometers above its junction with the Delidje Su, the *hüyük* of Aivalü<sup>2</sup> is situated on the northwest slope of the Chichek Dag. The north slope of the Chichek Dag is rather dry and salty, forming a beautiful and colorful landscape; it opens toward the Delidje Su plain in numberless, irregularly divided valleys (Fig. 12). In one of these valleys lies the salt mine of Tuzla. On the east this mountain slopes downward toward the Malya Chölü. Although this region is now a typical steppe, it must have been fertile in ancient times. I personally know of four *hüyüks* in this region, the Khas *hüyük* being very large.<sup>3</sup>

The formation on the north side of the Delidje Su is similar to that on the south side. Mountain chains, bare or covered with dry steppe grass, descend toward the plain. The higher complex, 30–35 kilometers north of the river, consists of groups of parallel ranges covered by scrubby trees, the dark green color of which contrasts strangely with the whitish limestone of the rocks. This north side is divided by valleys with streams running southward. The valleys

<sup>1</sup> Cf. *OIP*, V, 138 and 144–47.

<sup>2</sup> Chantre, *Mission en Cappadoce*.

<sup>3</sup> Cf. *OIP*, V, 148.



are relatively fertile, even though narrow. Meadows and gardens with trees are not infrequent near the villages. In one of these valleys flows the Kilik Özü, which joins the Delidje Su 8 kilometers northwest of Yerköi. Shortly before its junction with the Delidje Su it receives the Bagcheshi Deressi, on the upper part of which Büyük Nefez Köi is situated. Not far from here are the remains of the ancient Tavium.<sup>1</sup> In this region appear single tumuli or groups of them (for appearance, cf. Fig. 13) on especially prominent mountains or elevations.



FIG. 12.—THE DELIDJE SU PLAIN NEAR CHEREKLI

The largest tributary from these mountain chains is the Sarai Su (now called Bozuk Chai), which originates in Yozgad (Bozuk) itself and empties into the Delidje Su after having forced its way through an imposing rocky gorge near Asha Elma Hajilar above Yerköi. Besides the city of Yozgad, surely in ancient times an important settlement, there are two more ancient sites in this broad but unfertile valley. They are located near the two modern villages of Sarai and Asha Elma Hajilar.<sup>2</sup> These villages are like oases with their gardens and green trees amid the barren surroundings. Below the mouth of the Bozuk Chai,

<sup>1</sup> Cf. *OIP*, V, 107-8, and especially J. G. C. Anderson in *Studia Pontica*, I (Bruxelles, 1903), 18-24.

<sup>2</sup> Cf. *OIP*, V, 82.

the broad plain of the Delidje Su narrows toward the opening of the defile from which the river has emerged. At the former spot, on the north side of the river, lies a small *hüyük*; and not far from it, on the mountain slope itself, is a natural hot spring surrounded by the remains of a large ancient settlement now called Uyuz Hammam. South of this spring, on the southern side of the river, in a narrow valley descending from the high plateau of the Malya Chölü, is a second natural hot bath, the Bulumashlü *hammam*, at the foot of a *hüyük*.<sup>1</sup>

The northern part of these mountain ranges differs very much in its general aspect from this region. After passing the secondary watershed, the ranges are



FIG. 13.—TUMULI NEAR BATTAL

thickly covered with scrubby trees and the bare spots become rich meadows. In rocky valleys, partly covered with real woods, they slope northward toward the extremely fertile valley drained by the Budak Özü Chai. At the eastern beginning of this plain lies Boghaz Köi; and beside it, covering the slope of a mountain with partly protruding bed rock, are situated the remains of an ancient city, probably Hattushash. The modern center of this plain is Sungurlu, a *kaimakamlık* of the *vilayet* of Chorum. West of Sungurlu this plain gradually loses its fertility. The steppe grass which forms a strip on the northern slopes of the mountain ranges becomes wider as the strip proceeds westward. North of the river appear bare, rocky mountain formations which, together with reddish sandy plains or steppe grass-covered spots, constitute the typical landscape of the last part of the Delidje Su territory before this river joins the Küzül Irmak near Kula. Near their junction, on the east bank of the

<sup>1</sup> Cf. *OIP*, V, 85.

Delidje Su, are the important remains of an ancient settlement near Kaleh Boinu,<sup>1</sup> in an imposing strategical position dominating the territory far to the west. Two smaller streams from the south slopes of the Ulu Dagh join the Budak Özü 10 kilometers east of Sungurlu. One rises not far from Hüyük, which is situated on the eastern slope of this mountain and belongs to the plain of Aladja (a *kaimakamlık* of the *vilayet* of Chorum) in the Yeshil Irmak basin.

The whole south border of the Delidje-Konak Su valley, as mentioned before, is formed from the Chichek Dagh eastward to the Karajerli Su valley by the mountains bounding the Malya Chölü in the north. These mountains pass, at both the west and the east end, into an undulating plateau suitable for agriculture and therefore containing settlements now as also in ancient times. In the west near the *kaimakamlık* of Mejidiyeh (Boyalık), in the *vilayet* of Kirshehir, is a large *hüyük*; and in the east, where the plateau edge forms the southern side of the Konak Su defile, are two *hüyüks* (at Akche Koyun and Dedili). On the south this plateau slopes up toward a range of mountains, which then in turn slope down southward toward the Malya Chölü. Between the two settled parts in the west and in the east stands the irregularly divided, wild complex of the Kötü Dagh ("the bad mountain"), which really deserves its name. Its most remarkable elevation is the Kechi Kalessi ("goat's castle"), an easily seen landmark. A similar landmark, the Göz Baba *hüyük*, is situated on a high elevation in the eastern plateau.

The Karajerli Su, which bounds this plateau on the east and flows into the Konak Su near Hadji Shefatli, is formed by many small streams coming from the southwestern slopes of the Ak Dagh and from the mountains on the north border of the Küzül Irmak. It flows first through a slightly undulating plain which slopes downward toward the north, forming a valley of varying width where steppes and wheat fields alternate with fairly good meadows. This whole region is exceedingly rich in ancient settlements. I counted there not less than seven *hüyüks*. Others close by include a very large one in a small western lateral valley near the villages of Alibar and Temlik and two in an eastern lateral valley near Kuzaji.<sup>2</sup> Tumuli are less frequent in this region, but many can be seen on rather far away mountains.

On a tributary, the Tarla Su, joining the Kara Su from the east, is situated Boghazlayan, the seat of the third *kaimakamlık* of the Yozgad *vilayet*. This river forms around the town a fertile plain containing eight ancient sites; the

<sup>1</sup> Cf. *OIP*, V, 25-26.

<sup>2</sup> Cf. *OIP*, V, 89-96.







FIGS. 14 AND 15.—“HITTITE” HIEROGLYPHIC INSCRIPTIONS AT CHALAB VERDI

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largest of them are near Chalab Verdi<sup>1</sup> (where two "Hittite" hieroglyphic inscriptions occur, shown in Figs. 14-15) and Yoghun Hissar. The latter lies on another small tributary of the Kara Su, the Kirik Göz Özü, which also flows through this plain. On the north the plain is bounded by the Airi Dagh, on whose highest elevation are a number of large tumuli.



FIG. 16.—THE ALISHAR HÜYÜK WITH THE SUMERIN SIVRISSI IN BACKGROUND, AS SEEN FROM HOSMAN ON A SPUR OF THE CHOMAK DAGH



FIG. 17.—THE CHOMAK DAGH

North of the Konak Su and east of the Bozuk Chai is a mountainous region divided by two rather large streams, the Yozgad Su and the Yeniye Deressi, which flow southeastward through fertile valleys and join the Konak Su not far from each other near Sari Ören and Yudan, respectively. Besides these, a number of smaller valleys run down from the mountains toward the Delidje Su

<sup>1</sup> Cf. Forrer in *MDOG*, No. 65, p. 36.

## THE ALISHAR HÜYÜK

valley in a general southerly direction, providing fertile soil that means gardens, wheat fields, meadows, and trees near the villages located in these valleys. The most prominent elevation here is the Koch Tashak, on the summit of which are

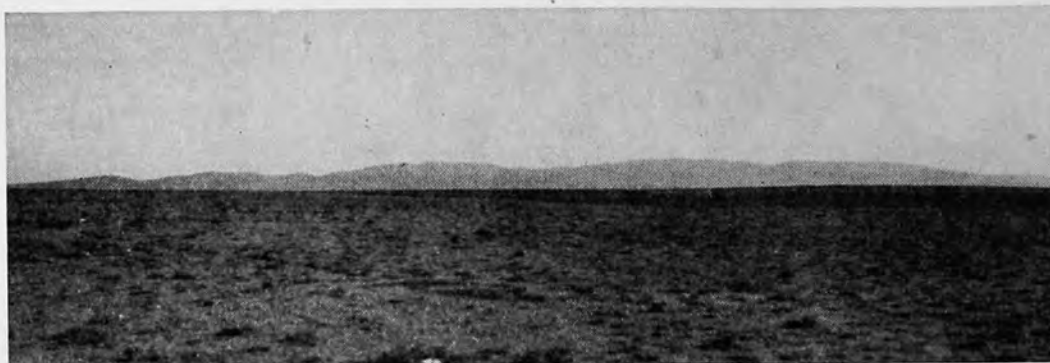


FIG. 18.—THE YAZIR DAGH



FIG. 19.—THE KONAK SU VALLEY AS SEEN FROM KUSHAKLI HÜYÜK, WITH THE CHOMAK DAGH IN BACKGROUND

tumuli almost large enough for *hüyüks*. At the eastern end of this region stands the Kerkenes Dagh. Beyond this mountain lies the eastern part of the Konak Su basin, a broad, undulating plain with the high pyramid of the Sumerin

Sivrissi towering in its midst. At the foot of this pyramid the Alishar *hüyük* is located (Fig. 16). This latter region has been especially carefully surveyed both for its topographical structure and for its remains of ancient settlements (Map 2).

This eastern part of the Konak Su basin forms a broad plateau bounded on the west by the Kerkenes Dagħ (1,529 meters), on the north by the Yalipunar Dagħ, on the east by the Chomak Dagħ (1,535 meters; see Fig. 17), and on the



FIG. 20.—CLASSICAL RUINS AT MESHIDLI

south by the Yazir Dagħ (1,623 meters; see Fig. 18) and its western extension, the Airi Dagħ. Southwestward the plateau forms the Bayad Chölü, which extends on the north and west to the cut through which the Konak Su flows. On the south the Bayad Chölü is bounded by the Zia Su, which, originating on the plateau itself, joins the Konak Su 4 kilometers east of Pasha Köi. In an incision of varying depth the Konak Su streams westward, dividing the plateau into two parts, of which the northern is about twice as large as the southern.

Besides this fertile and important plateau, the Konak Su basin was explored by the Expedition to the point a little farther east where the river emerges from the Ak Dagħ complex through a narrow, rocky gorge near Asap



MAP 2



ENVIRONMENT OF THE ALISHAR HÜYÜK





FIGS. 22 AND 23.—TERZILI HAMMAM. DETAILS OF FAÇADE OF ROMAN THERMAE

## THE ENVIRONMENT OF THE ALISHAR HÜYÜK 31

Bashli. There it enters a fertile plain (Fig. 19) of varying width with many ancient as well as modern settlements. Near Asap Bashli, on the westernmost extension of the Ak Dagħ, are the remains of a castle of uncertain date (pre-Roman); and at Asap Bashli itself, at Gündüslü, at Meshidli (Fig. 20), and also at Emir Bey are large classical ruins. A few *hüyüks* also are dispersed over this region. Especially to be mentioned are the large Kushakli Hüyük near Chikrikche (Fig. 21) and the Djelal *hüyük* in a northern lateral valley of the river not far from Hasbeg.

From this territory the Konak Su continues westward between the Chomak Dagħ and the northeastern spurs of the Yazir Dagħ, which force a slight narrowing of its fertile valley. Near Kadilli it receives a large tributary from the



FIG. 21.—KUSHAKLI HÜYÜK

southeast. In a small lateral valley of this tributary is situated Illisu, with a natural hot spring (known as Terzili Hammam)<sup>1</sup> and the remains of a Roman bath (Figs. 22–23) and traces of an ancient city wall. The valley of the Konak Su then narrows further and the river bends slightly toward the north, but soon turns sharply southwestward and forces its way through a narrow defile south of the Sumerin Sivriissi. After 4 kilometers it bends again northwest, to emerge after 6 kilometers from the defile. The slopes of the defile are rocky or sandy, void of any vegetation except a narrow strip just on the border of the river. Not far from the second bend is situated the modern village of Büyük Ören (“big ruin”), with a small *hüyük* and the ruins of a large, probably Roman, settlement. A few hundred meters upstream is a second, larger *hüyük*; and at the top of the slope on both sides of the stream groups of tumuli are situated.

<sup>1</sup> Cf. *OIP*, V, 18; also Chantre, *op. cit.*



After emerging from this defile, the Konak Su enters a second, smaller fertile plain, at the northwestern end of which lies Dedik, with three *hüyüks* near by. Then again the river enters a defile, bending sharply to the southwest after receiving its largest tributary, the Egri Özü, from the northeast. During its course in this defile, through which it forces its way between the extensions of the Kerkenes Dagħ and the northwestern slope of the Bayad Chölü, it receives



FIG. 24.—Öz Hüyük, SOUTH OF OSMAN PASHA TEKESİ. MAN STANDING ON TOP SUGGESTS SCALE

two more tributaries, the Yenije and Yozgad Su. Both originate not far southeast of Yozgad and flow through fertile valleys of varying width. The Yenije Su valley is rather narrow; it has only one small *hüyük*, near the village of Yenije. In the broader Yozgad Su valley we found two small *hüyüks* at Topje near its source, a very large one called Öz Hüyük south of Osman Pasha Tekesi (Fig. 24), and a third small one near its junction with the Konak Su itself. Not far from this junction, on the east side of the defile, lies another small *hüyük*. After the Zia Su has joined it, the Konak Su enters a plain around Pasha Köi which extends westward to Hadji Shefatli (Fig. 25). Near the latter



FIG. 25.—THE KONAK SU VALLEY BETWEEN PASHA KÖI AND HADJI SHEFATLI. A RUINED ARMENIAN VILLAGE OCCUPIES FOREGROUND; THE PASHA KÖI HÜYÜK IS SEEN IN CENTER OF BACKGROUND



FIG. 26.—SELIMLI

## THE ALISHAR HÜYÜK

village, after receiving the Kara Su from the south, the Konak Su enters its third defile, which ends near Yerköi. In the preceding plain are three *hüyüks*, the largest one being situated near Hadji Shefatli directly at the entrance of the defile.



FIGS. 27 AND 28.—THE SALIR HÜYÜK

Only the eastern part of the southern plateau is suitable for agriculture on a large scale. Consequently it has a number of prosperous small villages with small gardens and groups of trees (e.g., Selimli, Fig. 26). Six *hüyüks* too are

## THE ENVIRONMENT OF THE ALISHAR HÜYÜK 35

dispersed over its surface. The Yazir Dagħ, forming its boundary toward the south, is crowned by many tumuli. The Bayad Chölü, as its name suggests, is mostly a steppe with very few oasis-like depressions around small streams.



FIG. 29.—THE HÜYÜK NEAR KÜCHÜK CHALAA



FIG. 30.—A JAR SAID TO HAVE BEEN FOUND AT THE KÜCHÜK CHALAA HÜYÜK

Only near Sari Ören do I know of a *hüyük*. The Zia Su valley bounding the Bayad Chölü on the south is larger than these "oases" but partly marshy. It contains two *hüyüks* and on its western border near Battal an imposing group of five large tumuli.



The broader northern part of the plateau in the eastern Konak Su basin has, in general, the same features as the corresponding southern portion. It is merely more broken up by smaller or larger streams, tributaries of the Egri Özü. This river rises a little northeast of Yozgad and flows in a general easterly direction for about 32 kilometers. The valley surrounding it is broad and fertile, its northern and southern slopes covered with steppe grass and wheat



FIG. 31.—A BYZANTINE TOMBSTONE AT TUZLAJIK

fields. Very seldom is the bed rock exposed, and then for the most part on the summits of the mountains. Near Küchük Köhne are situated two *hüyüks*, both on the south side of the river. One kilometer east of Köhne, in the valley itself and not far from the river, is a natural hot spring with late classical remains.

A little east of the spring the Egri Özü bends southward. After receiving the Sorgun Özü from the northeast, it turns toward the southwest and so continues until its junction with the Konak Su. In other words, the Egri Özü bounds the huge complex of the Kerkenes Dagh on three sides. From the Kerkenes Dagh itself spurs extend in all directions, but especially to the

northeast. On one of them are the remains of a large ancient city (Keykavus Kaleh), its enormous walls still easily discernible but of course fallen down. Others show groups of larger or smaller tumuli (e.g., Üch Tepeler) or even a small *hüyük* (in the case of the spur west of the Keykavus Kaleh).<sup>1</sup>

On the very top of the Kerkenes Dagh itself is a *hüyük*, the remains of an ancient fortification, now called Göz Baba ("eye father"). This *hüyük* and those on the Koch Tashak and the Sumerin Sivriissi constitute three points, at least one of which may be seen from afar in any direction. The view from them is

<sup>1</sup> Cf. E. Huntington in *Zeitschrift für Ethnologie*, XXXIII (1901), 208-9; Anderson in *Studia Pontica*, I, 25-29; *OIC*, No. 2, pp. 34-35; Forrer in *MDOG*, No. 65, pp. 38-39; von der Osten in the *Geographical Review*, XVIII (1928), 83-92; and Erich F. Schmidt in *AJSL*, XLV (1929), 221-74.

magnificent! One glimpses far to the south the pyramidal form of the Erjas Dagh near Kaisariyeh; in the northwest the mountain ranges behind which Boghaz Köi is situated; in the north the Yalipunar Dagh; and in the east and southeast the Chomak Dagh, Ak Dagh, and Yazir Dagh, behind the last of which lies the fertile plain of Boghazlayan.

The Kerkenes Dagh slopes down eastward to the plateau, where a number of rich villages are located. Near Shakh Muratli large vineyards even cover the slope to half its height. *Hüyük*s and tumuli are dispersed over the whole region. The territory drained by the Sari Hamzali Su, which joins the Egri Özü near Yazili Tash, is not so rich in ancient remains, even though the valley and its borders are very fertile. The last part of the northern plateau extends from



FIG. 32.—THE HÜYÜK WEST OF KÜCHÜK KÖHNE

this tributary eastward to the Chomak Dagh and the Sumerin Sivriissi. Small elevations or ranges of hills, sometimes sandy, with picturesque rock formations, and sometimes covered with steppe grass, alternate with depressions around small streams or springs with fine pastures and wheat fields. Near the villages are gardens with beautiful fruit trees and vegetables. Near Penir Yemes even a small patch of woods is seen.

The Chomak Dagh is a complex of elevations with rounded tops forming a semicircle opening toward the north. The whole interior, and especially its western slopes, is thickly covered with scrub oaks. On its north slope are situated the large *hüyük* of Salir, surrounded by vineyards and gardens (Figs. 27–28), and a smaller one near Küçük Chalaa (Figs. 29–30). The highest elevations are crowned with tumuli. On its southern slope, near Sölemes, are large late classical ruins; and near Tuzlajik are remains of Byzantine masonry (Fig. 31).

Southwest of the Chomak Dagh the pyramidal Sumerin Sivriissi rises

abruptly out of the plateau to a height of 1,385 meters. Its top bears the walled remains of an ancient fortification. Halfway up its western slope are vineyards belonging to the large village of Chaush Kõi ("sergeant village"). And between its northeastern extension and the foot of the Chomak Dagħ is situated the Alishar *hüyük*.

The most remarkable feature of the whole region of the eastern Konak Su basin is the abundance of tumuli. On all elevations, whether prominent or not,



FIG. 33.—IRRIGATION CANAL AT TUZ-LAJIK

and often even in the plains, they appear singly or in groups. Most of them probably were burials of ancient nobles or princes. But many were surely signal posts, to survey the roads leading to this fertile region and to warn the inhabitants before the approach of enemies.

The *hüyüks* of this region are in general of two sorts:<sup>1</sup>

1. A natural hill or elevation, usually situated in a valley or on the slope of a mountain, with the culture deposits of an ancient settlement on it. The bed rock often protrudes. Examples are the Hadji Shefatli *hüyük*, Öz Hüyük, the Salir *hüyük*, Yoghun Hissar, Chalab Verdi, Kushakli Hüyük, and Burun Küshla.

2. An elevation consisting of culture deposits only, situated in the plain, on mountain slopes, or (small ones) even on mountain summits. Four different types occur. The first and largest ones are oval or nearly circular, with relatively flat surface. In this region, only the Jamarli *hüyük* (northwest of Jamarli) shows this form. The *hüyük* near Burun Küshla also has a flat top; but this was probably made in Roman times, as the wall remains surrounding the plateau indicate. The second and third types are usually smaller and have respectively pointed or rounded tops. The fourth type is characterized by a nearly circular or oval terrace, consisting of 6–10 meters of culture deposits

<sup>1</sup> Forrer in *MDOG*, No. 65, pp. 28–30, correlates the different forms of *hüyüks* with their origins. But I cannot agree with his theory. Only a series of excavations can determine the facts.

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above the level of the plain. On this terrace appears a second elevation as high as 20–30 meters. The only two mounds of this type known to me in this region are the *hüyük* west of Küçük Köhne (Fig. 32) and the Alishar *hüyük*.



FIG. 34.—IRRIGATED FIELDS ON THE ALISHAR HÜYÜK



FIG. 35.—PLOWING NEAR THE EXPEDITION'S CAMP BESIDE THE ALISHAR HÜYÜK



## THE ALISHAR HÜYÜK

Before describing the latter in detail, a few statements are in order concerning the Delidje Su basin in general and its eastern part in particular. Along the Delidje Su from Cherekli to Hadji Shefatli runs the new railroad from Angora to Kaisariyeh. Through many tunnels it passes the defile from Yerköi to Hadji Shefatli, where it bends southward to follow the Karajerli Su valley. Yerköi is



FIG. 36.—TURKS

the railroad station for Yozgad, with which it is connected by the old main road leading from Angora by way of Köprü Köi. This, like the railroad, follows the Delidje Su from Cherekli eastward until it bends northeast into the valley of the Bozuk Chai. This road continues northward via Chorum and Merzivan until it reaches the shore of the Black Sea at Samsun. From Yozgad a second main road leads southward via Boghazlayan to Kaisariyeh, following first the Yozgad Su and part of the Zia Su, then crossing the mountains toward the plain

## THE ENVIRONMENT OF THE ALISHAR HÜYÜK 41

around Boghazlayan. A third road leads northwestward via Boghaz Köi and Sungurlu toward Kalejik. Not far out of Yozgad a fourth road leaves the northern one and follows the Egri Özü valley via Köhne to Sivas.

All these main roads enter the fertile plains and valleys through easily closed defiles, and near each of them an ancient fortification is usually situated. This division of the whole territory into small areas is characteristic for the



FIG. 37.—KURDS

whole of Asia Minor. We must probably see in all of them ancient principalities independent of one another and united for the first time probably by the Hittite rulers of Hattushash. Of such possible principalities we have a large number in the basin of the Delidje-Konak Su or in its immediate surroundings, among them the north slope of the Bebrek Dagh, the north slope of the Chickek Dagh, the plain around Sungurlu and Boghaz Köi, the plain of Aladja, and the plain around Chorum. These last two areas belong to the Yeshil Irmak basin. Yozgad might easily have been the center for the valley of the Bozuk Chai, the settlements around Yerköi, and the upper part of the Egri Özü valley. On the east slope of the Chickek Dagh, extending toward the Malya Chölü, might have

existed another principality. The Karajerli Su valley, extending to Karafakeli and perhaps connected with it, and the plain around Boghazlayan, a center of which might have been Chalab Verdi or Yoghun Hissar, may also have been principalities.

The small plain around Pasha Köi belonged perhaps to the large territory included in the eastern Konak Su basin. There we have a number of prominent settlements, especially the Kerkenes Dagh city; but I do not think the latter was only a local capital for this territory. An excavation there would surely tell us of what faintly known empire it was the capital. The large Salir and Burun



FIG. 38.—A DEİRMEN OR WATER MILL

Küşla *hüyüks* are situated too far on the outskirts of the eastern Konak Su basin; only the Jamarli and Alishar *hüyüks* remain as possible local centers. Considering the distribution of tumuli, which are probably the tombs of at least prominent, if not royal, persons, the Alishar *hüyük* seems in ancient times to have been the political center of this area.

At present this territory is relatively thickly settled, which is not surprising considering its fertility. Many *chiftliks* are dispersed over it, large farms owned by rich people in Yozgad and even Angora. One of them is even equipped with Fordson tractors. There are also a number of wealthy farmers in the villages. For instance, in Abujak lives a man with a bank account in Angora of 100,000 Turkish pounds (\$50,000)! Sheep-raising is the main industry. Excellent grapes are raised in Shakh Muratli, Salir, Alishar, and Abujak. In Bahatlin is a

distillery for *rakki*, the national drink. Transportation is mainly by donkey, oxcart, and *araba*. Horses are owned mostly by only the more prominent villagers; especially fine animals are found among the Cherkess. The irrigation system is well distributed (Figs. 33–35), and many good springs are dispersed over the whole territory with the exception of Bayad Chölü. The present population consists of Turks (Fig. 36), Küzül Bash, a few Armenians, Kurds (Fig. 37), Tatars, and Cherkess. Of ninety-five villages in this territory, sixty-six are Turkish, two are half Turkish and half Küzül Bash, fourteen are Küzül Bash, one is inhabited by Turks and Kurds, one by Tatars, two by Cherkess; and nine, formerly Armenian, are now inhabited by *muhajirs* (immigrants from the Balkans). There are still a number of Armenians living here, some of them running small water mills (*deïrmen*), which are thickly distributed over this territory (Fig. 38).



THE MOSQUE AT HOSMAN. THE CALL  
TO EVENING PRAYER



## III

## THE TOPOGRAPHY OF THE ALISHAR HÜYÜK

The Alishar *hüyük* (Map 3 and Figs. 39–48) is situated in the center of a depression between the Sumerin Sivriissi and the Chomak Dagh. A creek, the sources of which are not far from the village of Hosman on the southwest slope of the Chomak Dagh, flows through a fairly broad and fertile valley into the Konak Su. This creek parallels the eastern extension of the *sivri* and passes the village of Alishar. The *hüyük* is situated 2.75 kilometers north of this village. Its northern and western slopes are bounded by the above described creek. Shortly before the creek reaches the *hüyük*, a mill race branches off to the southwest, flows around the south side of the *hüyük*, and rejoins the creek at the southwestern corner of the mound. The creek is bordered by a number of trees and, near Hosman and Alishar, by rich gardens. The whole valley, with the exception of the bottom land, which serves for gardens or pastures, is occupied by wheat fields.

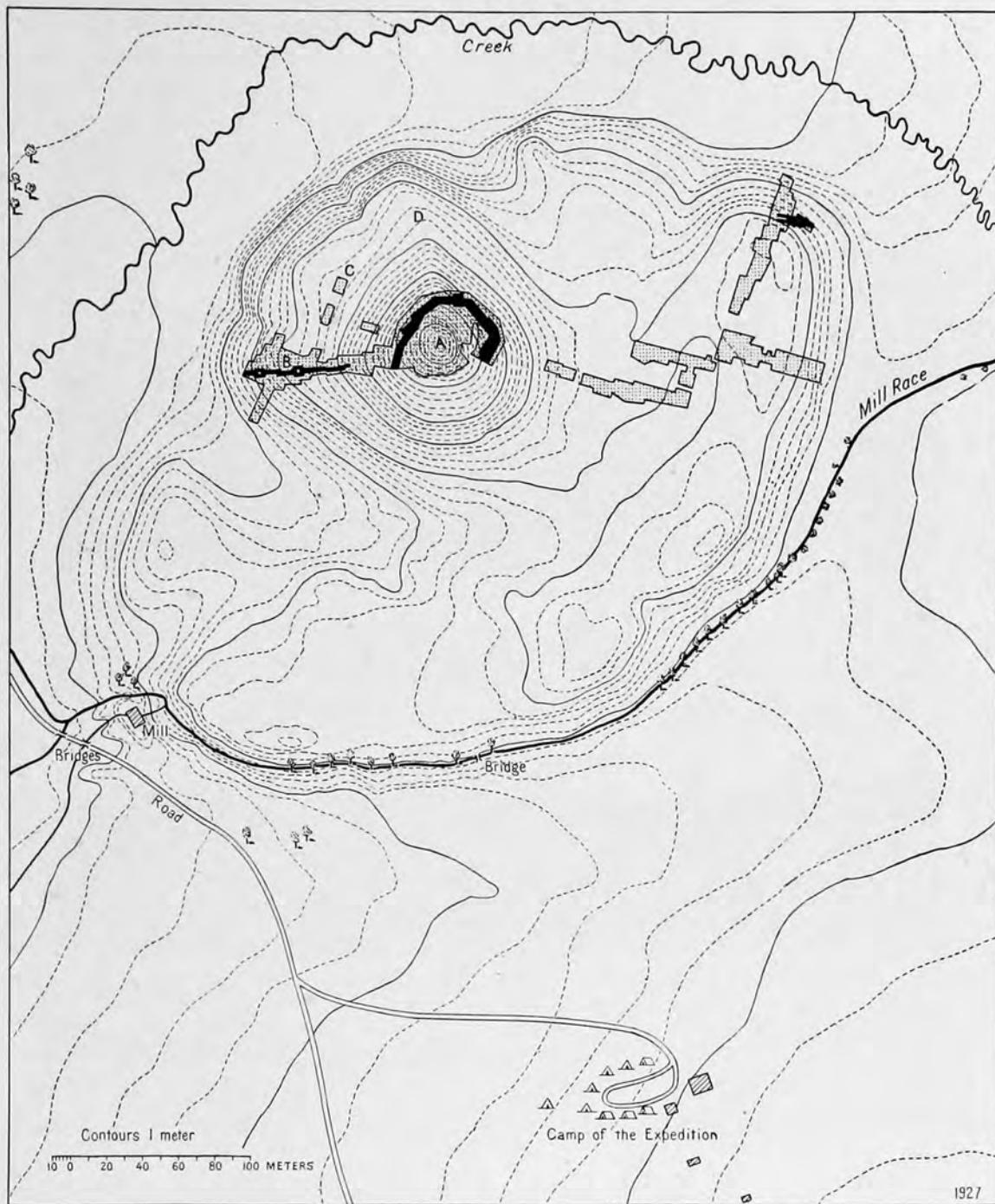
South of the *hüyük* a country road leads to Terzili, near which the famous hot spring is situated. Not far from its eastern slope lies another road, connecting Hosman with Alishar. Finally, a third road, passing near its western slope, connects Chaush Köi with Hosman after crossing the road leading southeast toward Terzili.

The *hüyük* itself consists of an approximately oval terrace 520 meters in length and 350 meters in width (shown complete in Fig. 39), its average elevation above the level of the creek valley being 5–8 meters. In the western sector the terrace rises to a second elevation (Mound A), 245 meters long with an average width of 145 meters. The highest point of this elevation is situated almost in the middle of the terrace and 24.25 meters above the general level of the terrace. It has steep slopes toward the east, north, and south, but a more gentle slope toward the west. There it ends in three uniform promontories (B, C, and D) which represent a part of the west slope of the *hüyük* itself (Figs. 41–42).

On both sides of this elevation depressions lead up to the plateau of the terrace (cf. Fig. 42). The outer border of the plateau shows five smaller elevations. Toward the interior the terrace surface becomes more nearly level, but

THE TOPOGRAPHY OF THE ALISHAR HÜYÜK

MAP 3



THE ALISHAR HÜYÜK

## THE ALISHAR HÜYÜK

with a slightly depressed zone extending about three-quarters around the higher elevation. On the surface of the terrace could be seen the foundations of a few buildings, marked by slight elevations. Many of these, now excavated, have proved to be of Osmanli or late Seljuk origin. Otherwise there were no



FIG. 39.—THE ALISHAR HÜYÜK FROM THE EAST, SHOWING COMPLETE WIDTH OF TERRACE



FIG. 40.—THE ALISHAR HÜYÜK FROM THE SOUTHEAST, WITH THE EXPEDITION'S CAMP IN FOREGROUND

traces of ancient settlements to be seen except a large number of pottery fragments covering the whole surface of the *hüyük*. Many large and small stones certainly originating from ancient constructions were also dispersed over the surface.

On the south slope of the *hüyük* (Fig. 43) a small water mill (*deürmen*) is situated, and 600 meters farther to the north is a second one. Directly west of

## THE TOPOGRAPHY OF THE ALISHAR HÜYÜK

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the *hüyük*, on the other side of the creek, are the remains of a few houses from an Armenian settlement destroyed some thirty years ago. There also is situated a large cupstone similar to others found in Plots IX and XXIV of the



FIG. 41.—THE ALISHAR HÜYÜK FROM THE WEST



FIG. 42.—THE ALISHAR HÜYÜK FROM SOUTH OF WEST. THE MOUNDS VISIBLE FROM THIS POSITION ARE LETTERED (A, B, C, AND D). IN BACKGROUND, THE CHOMAK DAGH. HOSMAN IS VISIBLE AT EXTREME LEFT



## THE ALISHAR HÜYÜK

excavation (pp. 131 and 180). On the northeast, about 150 meters from the present slope of the *hüyük*, is a small elevation likewise covered with a number of pottery fragments. It is perhaps a necropolis belonging to the *hüyük*. A



FIG. 43.—THE ALISHAR HÜYÜK FROM THE SOUTHWEST, WITH MOUND A IN CENTER AND A WATER MILL AT RIGHT

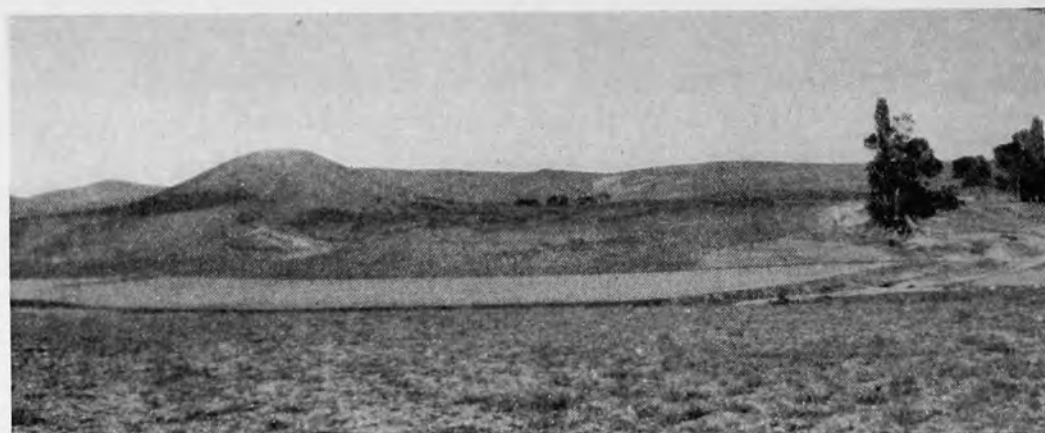


FIG. 44.—THE ALISHAR HÜYÜK FROM THE SOUTHWEST, WITH THE CHOMAK DAGH IN BACKGROUND. PLOTS I-III, EXCAVATED ON MOUND B, ARE VISIBLE TOWARD THE LEFT

similar elevation was found 200 meters south of the *hüyük*, near the road to Alishar.

The view from the top of the Alishar *hüyük* is splendid (Fig. 45). To the northeast one sees the Chomak Dagh with the village of Hosman. The gently

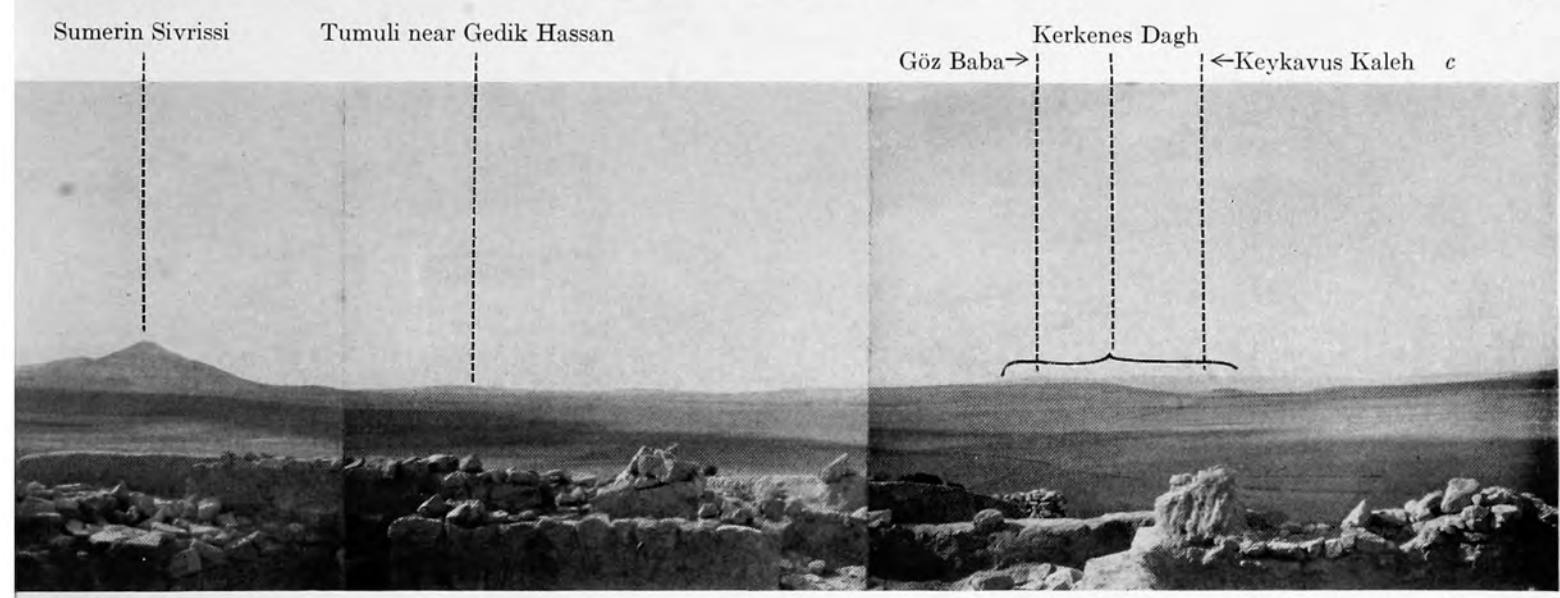
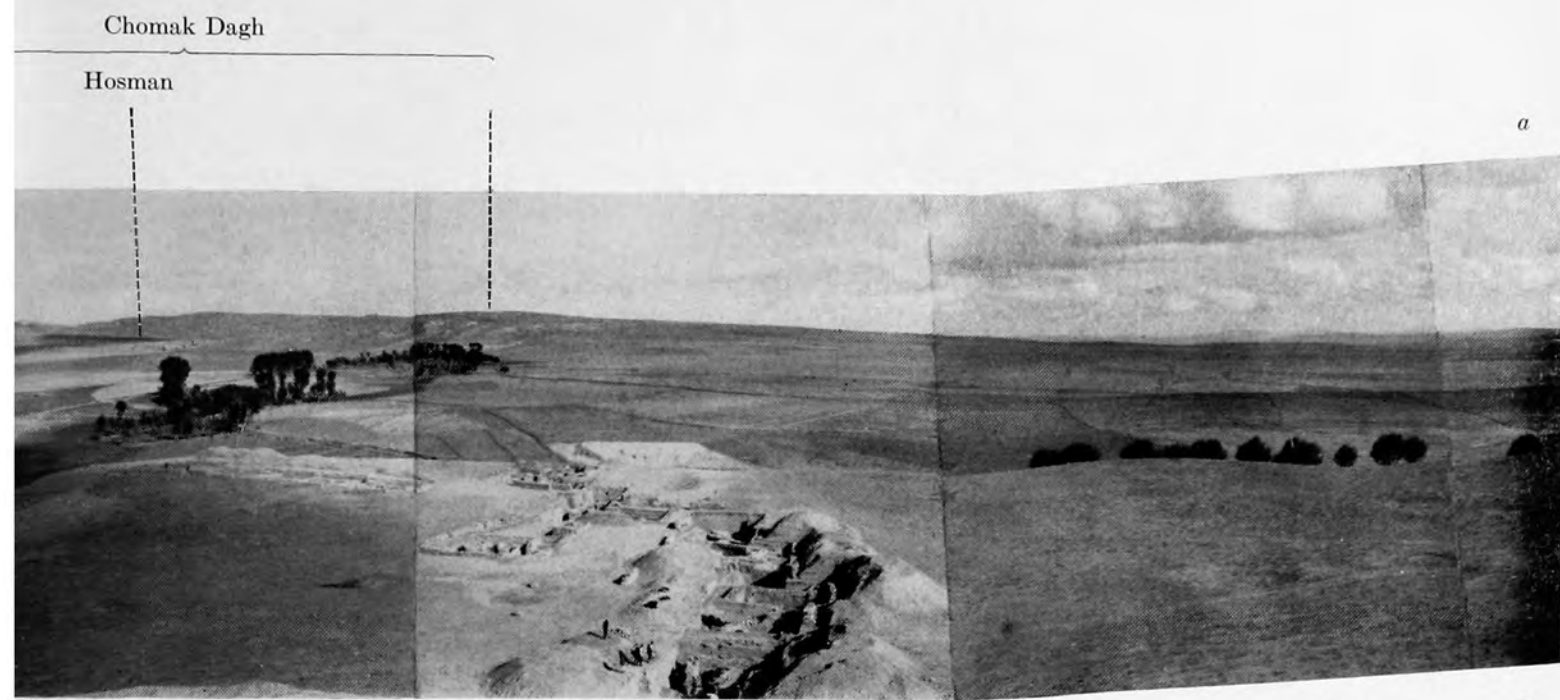
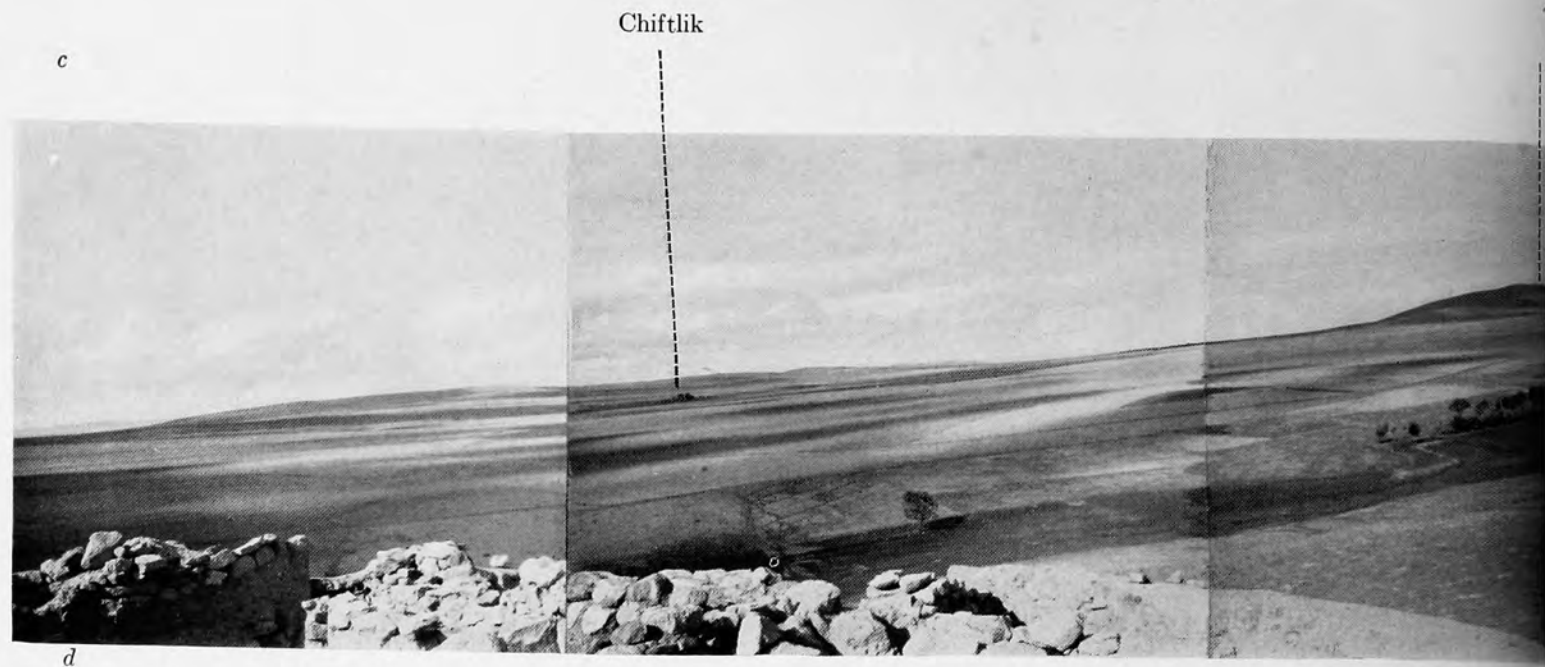


FIG. 45.—SURROUNDINGS OF THE ALIŞAR KÜYÜK. PANORAMA FROM TOP OF MOUND A



undulating slopes of the Chomak Dagħ, with bed rock protruding here and there but mostly covered with wheat fields reaching down to the Konak Su



FIG. 46.—THE ALISHAR HÜYÜK FROM THE NORTHEAST. IN BACKGROUND, THE SUMERIN SIV-RISSI



FIG. 47.—THE TERRACE OF THE ALISHAR HÜYÜK AS SEEN FROM MOUND A. THE CHOMAK DAGħ, WITH HOSMAN JUST VISIBLE NEAR CENTER, FORMS THE BACKGROUND

valley, form the limit of the eastern horizon. On top of the Chomak Dagħ, as well as on its slopes, a number of tumuli are visible. Over a spur of the Chomak Dagħ one sees far to the southeast the mighty complex of the Ak



## THE ALISHAR HÜYÜK

Dagh. Then, turning westward, in the south the mountain chains of the Yazir Dagħ and its extension, the Airi Dagħ, can be seen. Many tumuli are visible on the skyline of this complex. Over the gently undulating northern slopes of this complex to the brink of the plateau, where there is an abrupt fall to the valley proper of the Konak Su, many villages are dispersed, with groups of trees and gardens and also a few *hüyüks* (near Kadilli, Domarja, Kötü Köi, and Burun Küshla). To the southwest extends the southern part of the creek



FIG. 48.—THE ALISHAR HÜYÜK. THE NORTHERNMOST SPUR (D) OF MOUND A, LOOKING WEST FROM A POINT ON THE TERRACE ITSELF. IN FOREGROUND ARE REMAINS OF BUILDINGS

valley in which the *hüyük* is situated. As the eye travels downstream, many groups of trees are seen between the *hüyük* and the village of Alishar. Beyond rises a rocky elevation with a few tumuli, forming the northern limit of the Konak Su valley. Directly southwest of the *hüyük* and 5 kilometers away appears the imposing pyramid of the Sumerin Sivri with its *kaleh*. Into the foreground on the west extends the northeastward spur of the *sivri*, crowned by six tumuli. Not far behind it lies the village of Chaush Köi. The Kerkenes Dagħ, with the Göz Baba *hüyük*, Kiramitlik, and Keykavus Kaleh,<sup>1</sup> forms the western background. Through a depression in the western border of the creek

<sup>1</sup> Described by von der Osten in the *Geographical Review*, XVIII (1928), 83-92, and especially by Schmidt in *AJSL*, XLV (1929), 221-74.

valley one is able to see to the northwest a large part of the fertile plain extending from the slopes of this mountain eastward; the villages of Shakh Muratli, Yazili Tash, and Mehemed Beli lie in the line of vision. On the north an elevation between Karaveli and Bahatlin shows a number of tumuli on the horizon. The slope is covered with wheat fields; at its foot appears a small group of trees near Chiftlik, a former Armenian village now inhabited by Turks. Behind this elevation appears the beginning of the mountain chain called Üch Tepeler. In the north, finally, between the end of the elevation near Bahatlin and the Chomak Dagh one sees a high mountain chain situated north of the Egri Özü, with the Halil Baba, a large tumulus or *hüyük*, on its northeastern corner.

From Map 2 it is evident that tumuli are centered thickly about the Alishar *hüyük*. There is no doubt that at least some of them will prove on excavation to be burial places of important people, possibly princes, of the ancient city which it hides.

## IV

## THE EXPEDITION

On March 8, 1927, the Expedition left Chicago, sailing from New York on March 12. A two-day stop was made in Paris, where we studied the Louvre collection of pottery from Asia Minor. Thence we proceeded via Rome to Egypt, where the Director of the Oriental Institute, Dr. James H. Breasted, was staying at the time. At Rome we called on Professor F. Cumont, who had traveled over a large part of the Küzül Irmak basin, in order to obtain his valued opinion on several problems. By the end of March we had reached Cairo, where we rendered a report to Dr. Breasted and received his final instructions. The trip was then resumed on a Khedivial Mail steamer.

On April 6 the Expedition reached Stambul and began immediately its preparations. The writer, accompanied by Mr. F. H. Blackburn, proceeded to Angora to submit to the Turkish government an application for a permit to excavate the Alishar *höyük*. With the well-known courtesy of the Turkish officials, permission was quickly granted. Among those who showed a helpful interest in the Expedition were His Excellency Nedjati Bey, Minister of Public Instruction; Mübarek Ghalib Bey, Director General of Antiquities; His Excellency Sabri Bey, of the Ministry of the Interior; and Halil Bey, Director General of the National Museum at Stambul. Ambassador Grew and his staff, especially Mr. Jefferson Patterson, Mr. Bergin, and Malik Bey, were also very kind.

The last part of April and the first part of May were used in completing our preparations and in sending a party out to the *höyük* to construct a suitable camp (Figs. 49-50). Again our friends of last year, railroad engineers<sup>1</sup> with the firm of Redlich and Berger, of Vienna, helped us in the most generous manner, not only by undertaking to build and equip the camp, but also by furnishing the necessary working materials, such as shovels, picks, and wheelbarrows. They even gave us one of their trained foremen, Mr. Josef Reifenmüller, who has now become a permanent member of our Expedition. With the help of these engineers and the co-operation of all the Turkish authorities and officials with

<sup>1</sup> Cf. *OIC*, No. 2, p. 95.



FIG. 49.—THE CONSTRUCTION OF THE CAMP



FIG. 50.—ROOFING THE HOUSE



THE ALISHAR HÜYÜK



FIG. 51.—THE CAMP



FIG. 52.—THE STOREHOUSE

whom we came in contact, the preparations were finished (Figs. 51-52) on May 27, so that the actual excavation work could begin.

The staff of the Expedition consisted of the Turkish government commissioner, Ali Sherafeddin Bey; Dr. Erich F. Schmidt, of the American Museum of



FIG. 53.—THE MEMBERS OF THE EXPEDITION STANDING BEFORE THE HOUSE

Natural History in New York; Mr. Frank H. Blackburn, Mr. Josef Reifemüller, Lutfi Tachsin Bey, and the writer. In addition, Mrs. von der Osten had joined the party. Our faithful chauffeur of 1926, Hüssein, was again with us. A Ford touring car and a Ford truck were bought for our transportation, so that

THE ALISHAR HÜYÜK



FIG. 54.—ROLL CALL



FIG. 55.—PAY-DAY

we would be independent of the slow native *arabas* and, in emergency cases, of the railway also. Mr. Scharer, the carpenter, and Ramona Gonzales, the cook, completed the staff (Fig. 53).



FIG. 56.—WORKMEN



FIG. 57.—A WEDDING AT HOSMAN

The responsibilities of the Expedition were distributed mainly among Messrs. Schmidt, Blackburn, Reifenmüller, and the writer. Mr. Reifenmüller was our business manager, employing and paying the workmen and procuring



food and working-tools. Dr. Schmidt was in charge of the actual excavation with all the registration work connected with it. Mr. Blackburn did all the surveying work on the *hüyük* and at the same time conducted explorations in the surrounding territory. Ali Sherafeddin Bey, besides showing us every courtesy in the performance of his duty as government commissioner, was so kind as



FIG. 58.—THE RAILWAY STATION FOR HADJI SHEFATLI

to make for us many excellent water-color sketches of decorated vases and vessels, including those reproduced in the plates of this volume.

The whole organization was planned on the basis of starting excavations at the least expense. In case the project did not prove worth while, no funds would then have been spent unnecessarily. On the other hand, in case the project did prove to be worth while, the whole enterprise was so arranged as to be easily enlarged. In other words, we undertook to form a *cadre* of material and workmen. We employed Turks exclusively, with the exception of a few Kurds and Küzül Bash. The Turkish farmer is generally a reliable worker, and so we had no difficulty in this direction (Figs. 54-56). Our relations with all the surround-

ing villages were excellent, and we received many invitations to weddings (Fig. 57) and other occasions.

Until June 15 all transportation and communication with Angora was difficult, since Yerköi was the railroad terminus. The roads from Yerköi to our place were very poor, and one had to spend four or five hours preparing the Ford for each trip. After June 15, however, the railroad was put into service as



FIG. 59.—A VISIT FROM HIS EXCELLENCY THE GOVERNOR GENERAL OF THE VILAYET OF YOZGAD

far as Kaisariyeh, which made it possible for us to make connections with the railroad at Hadji Shefatli (Fig. 58), only two and a half hours from Alishar. A few of the necessary supplies could also be obtained in Yozgad, some three hours from Alishar.

It was interesting to observe what great interest was taken in our work not only by the Turkish officials but also by the people themselves. During the season we had many guests, such as His Excellency the Governor General of the province of Yozgad (Fig. 59), the Director General of Antiquities, Mübarek

THE ALISHAR HÜYÜK



FIG. 60.—TURKISH SCHOOLBOYS FROM CHAUSH KÖI VISITING THE EXCAVATIONS



FIG. 61.—MENDING POTTERY



FIG. 62.—THE EXPEDITION'S BOXES PACKED READY FOR SHIPMENT TO ANGORA



FIG. 63.—THE EXPEDITION'S BOXES ON THEIR WAY TO THE RAILROAD



Ghalib Bey, and the Director of Education of Yozgad. We had the pleasure of receiving a number of distinguished American and European visitors also, including Mr. Bergin, of the American embassy; Professor R. M. Riefstahl, of New York University; the celebrated Byzantinist, G. de Jerphanion, of Rome; Dr. Stefan Przeworski, of the University of Warsaw; and Professor Wichgraf, a prominent landscape-painter, who made several paintings for the Expedition. School-teachers of the near-by villages came to visit us with their pupils (Fig. 60), and people from Yozgad were not infrequent visitors at our camp.



FIG. 64.—THE STAFF OF THE ANATOLIAN EXPEDITION MAKING THE ACQUAINTANCE OF DR. HAROLD H. NELSON AT LUXOR, EGYPT

Besides the actual excavation, accompanied by keeping of the field catalogue, mapping of the excavated plots, mending and drawing of the pottery (Fig. 61), etc., a survey of the surrounding territory and registration of ancient remains was started in a systematic way.

The excavations begun on May 27 were continued until November 1. From November 1 until November 30, laboratory work was done on the spot and the excavated material was packed and shipped to Angora (Figs. 62-63). There two more weeks were spent in laboratory work in a large room of the Ethnological Museum, where we were assisted in the kindest way by Professor Julius

## THE EXPEDITION

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von Mészáros and by Dr. Hamid Bey, the Director. His Excellency, Nedjati Bey, the Minister of Public Instruction, then generously gave us permission to prepare a study collection for our Institute, and without delay the export permit was granted. The boxes reached Chicago promptly, and their contents will presently be put on exhibition in the new building of the Oriental Institute.

On January 1, 1928, the members of the Expedition left Stambul for Egypt to report to Professor Breasted, and spent a few delightful days at Chicago House at Luxor (Fig. 64). On February 9 the Expedition again arrived in the United States, but for only a short stay, as its second season of excavation was to start on May 15.



THE CAMPANA. THIS BELL SUMMONED AND  
DISMISSED THE WORKMEN

## V

## EXCAVATION METHODS

To date, hardly any excavations have been started at ruins in Asia Minor in which the excavators did not have some hint as to what they might anticipate. Structures were visible at one site, while sculptures or tablets were known to have been taken from certain other localities where subsequently excavations have been carried on.<sup>1</sup> But nothing was known of the Alishar *hüyük*. The only clue to its importance was its size. The main mound (A on Map 3) rises approximately 20 meters above the roughly oval terrace, which is about 520 by 350 meters in area and elevated from 5 to 8 meters above the surrounding territory.

We decided to attack Mound A by way of one of the three promontories extending from it toward the west.<sup>2</sup> We wanted to know what was hidden within the huge truncated cone of soil, which showed no surface indications of buildings, such as rows of stones, strips of scanty vegetation, or slight elevations and depressions.

The lack of points of attack dictated our working method. We excavated in plots the dimensions of which varied according to the topography of the mound and the extent of the structures uncovered. For the orientation of the workers, the plot contours were marked by rocks. After a nucleus of workers had been trained, one of the good men was appointed as foreman. He then worked in this area with a fixed number of other diggers until its excavation was completed. The practical value of excavating small, limited blocks of the mound at a time is obvious in mapping the excavated structures and in recording the specimens. The find-spot was determined by the number of the plot and by the position and depth within the latter, measured from the surface or in relation to some structure—a room, a pit, etc. At the same time the psychology of the laborers was considered. Each was emotionally interested in his particular plot, and the various groups competed with one another in doing the best job in their individual areas.

<sup>1</sup> E.g., at Hüyük near Aladja the sphinxes and other sculptures attracted the excavator; at Boghaz Köi it was the extensive architectural remains; while from Kül Tepe cuneiform tablets had been coming into the antiquities market since the end of the nineteenth century. Chantre's soundings at Aivalü and at Orta Hüyük near Dedik were exceptions. On all these sites cf. pp. 7-8.

<sup>2</sup> See chap. iii.

In this manner several series of coherent plots were excavated, forming trenches (cf. Map 3) which represented at the end of the first working season an almost complete cross-cut through the mound from east to west, with one extension toward the north. At places the direction of the excavation was dictated by the course of the structures, e.g., the main *kerpich* (sun-dried brick) wall on the southern promontory of Mound A, the citadel wall encircling Mound A, and the town wall struck in the northern trench.<sup>1</sup> However, with the exception of the top layer of Mound A, we did not intend to trace structural complexes or settlements in their entire extent during the first season. Instead, we penetrated to the base of the mound terrace at several spots where recent structures were absent or scarce, in order to obtain a vertical section in addition to the horizontal cross-cut.

We did not expect that the huge culture deposit represented by the Alishar *höyük* had been accumulated during one period of habitation, and we considered it one of our principal aims to define the successive layers and their contents. The essential factor in establishing the chronology of the objects excavated, and of the historical facts connected with them, is to record faithfully the depth of the artifacts, with their relations to each other and, as far as possible, to the architectural remains. Our way of recording specimens is best explained by a concrete example. After a vessel had been found, it was photographed *in situ* and its find-spot<sup>2</sup> was marked on a sketch such as was made of each plot during its excavation. Objects associated directly with the vessel or others frequent in its layer were recorded. Then the find was entered in the field catalogue, together with the series of other objects uncovered in the same plot, and received its field number. After it had been cleaned and, if necessary, repaired, its measurements, description, and photographs were filed in the final main catalogue together with other vessels of the same type or with similar associations.

To date, cuneiform records, seals, and sculptures have been the principal clues to establishing preclassical chronologies in Asia Minor.<sup>3</sup> None of these ob-

<sup>1</sup> Cf. chaps. vi and vii.

<sup>2</sup> The German term *Fundstelle* is very convenient, but lacks an English equivalent. Its literal translation, "find-spot," though not in regular use, meets a real need.—EDITOR.

<sup>3</sup> No finds except the Boghaz Köi tablets have given absolute dates. On these, cf. pp. 15–16, nn. 4–8; and on seals cf. p. 17, nn. 48 and 49. As to the so-called Cappadocian tablets, cf. Contenau, *Trente tablettes cappadociennes* (Paris, 1919); D. D. Luckenbill in *AJSL*, XXXVIII (1922), 229–30; Julius Lewy, *Studien zu den altassyrischen Texten aus Kappadokien* (Berlin, 1922); Lewy in *ZA*, XXXV (1924), 148–51; Benno Landsberger, "Assyrische Handelskolonien in Kleinasien aus dem dritten Jahrtausend,"



jects are frequent enough to be of use during an excavation. As a matter of fact, of the three categories mentioned, we found seals only.<sup>1</sup> Our main criterion for determining the sequence of the periods represented in the mound was the pottery.

There were many thousands of potsherds in our sherd yard, arranged according to the plot and according to the depth within the plot. Our rough scale registered the contents of arbitrary layers of soil about 1 meter thick. In case the plot was excavated on a slope, the sherds were separated only according to the structures from which they came. Floors of rooms, superimposed fireplaces, and refuse pits were our units.

Our most sensitive instrument for recording the time relations of the pottery types and of the objects associated with them is explained in detail below (chap. viii). A "core" of soil, left standing within the excavated area or adjoining an exposed face where the stratification of the culture deposits looked favorable, was sectioned in arbitrary layers of uniform thickness. The contents of these strata, sherds principally, but also animal bones and all the other objects, were recorded according to the stratum of the find. In this manner the scale of the ceramic types was established and their sequence determined.

Complete vessels were scarce; but, in addition to them, a number of broken pots were found *in situ*, i.e., in rooms, in pits, etc. The find-spot of these pots, which often gave valuable chronological information, was regularly mapped.

Much attention was paid to the skeletal material. Nearly all the human remains were in bad condition, due to various factors to be explained in a later volume.<sup>2</sup> But with the aid of small digging-instruments we succeeded in obtaining valuable archaeological information about the burials, although some of the material will be of little use to the physical anthropologist.

Concerning the excavation of the architectural remains, our *kerpich* walls were difficult to trace. Often they could hardly be distinguished from the surrounding soil, especially in cases where part of the bricks had been washed down or had crumbled off, mixing with the ordinary soil. "Polishing" suspicious-

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*Der Alte Orient*, XXIV, Heft 4 (1925), with Lewy's review of it in *OLZ*, XXIX (1926), 750-61 and 963-66; Ferris J. Stephens, "Studies of the Cuneiform Tablets from Cappadocia," *Culver-Stockton Quarterly* (Canton, Missouri), II (1926), 11-58.

<sup>1</sup> See *OIP*, Vol. VII (to be published).

<sup>2</sup> *Ibid.* The skeletal material has been brought to Chicago and put into the hands of the Department of Anthropology for treatment and study.

## EXCAVATION METHODS

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looking spots with a trowel and cleaning them with a whisk broom resulted, in many instances, in uncovering the brick marks. But sometimes the only way to trace such a wall was to dig into dark soil near a *kerpich*-like spot and proceed toward the latter by cutting off vertical slices and, at the same time, trying to find the stone foundation present below most walls of this nature.

The stone walls were easier to trace, although in many cases only a few foundation layers had been preserved. The determination of the structural layers, marked by superpositions of buildings and by their relative depth, will be one of the aims of the following working season. It is rather certain that more architectural levels than ceramic periods will be established.

During the first season, it was our principle not to remove any structural remains. For the second season, however, it is planned to section the highest deposit present, namely Mound A. Here we expect to amplify the data concerning our local periods and to find sufficient evidence to link up the latter with the culture horizons of Asia Minor.

## VI

## THE EXCAVATED AREAS

At the beginning of the season we had to decide whether to uncover, layer by layer, entire buildings or settlements, or to cut across the mound and thus gather information about the horizontal and especially the vertical distribution of culture strata and their contents. We decided to cut across the site, leaving the uncovering of entire architectural complexes for the second season. For this reason the architectural data are necessarily fragmentary, only parts of walls or rooms having been uncovered in most of our plots. For similar reasons it was in many cases not possible to establish the time relations of structures as readily as those of small objects.

Trivial differences in levels complicated the situation. Again, older structures may have been re-used or filled with more recent refuse, while old refuse excavated during the construction of buildings may have been thrown on top of more recent remains. The situation in Plot XIII was particularly instructive in this respect. Here the bottom of a Turkish refuse pit (No. 17) was 3.90<sup>1</sup> below the mound surface and level with Period II remains certainly several millennia older. At the same depth in another pit, Roman pottery was found, discarded apparently in the same way as the Turkish detritus. This means that Turkish, Roman, and Period II remains were found at the same level, while necessarily, during the digging of these refuse pits, remains of earlier periods were thrown out on top of later remains in reversed sequence.

Furthermore, structures situated directly above the original surface did not necessarily belong to the oldest period (I). In Plots XIV and XV, for instance, Period II deposits extended to the original surface; i.e., only part of the Period II settlement was superposed on Period I deposits, while the rest extended beyond the limits of the earlier occupation. Again, at another spot (Plot XXIX) the Period III deposit extended as deep (6 meters) as Period I or II layers at other places.

The height of the culture deposit varies. The original surface was struck at the following depths: 4.90 (Plot XI); 5.00 (Plot X Stratigraphic Annex); 5.10-

<sup>1</sup> The metric system is used throughout. The decimal point precedes fractions of meters.

5.50 (Plot IX); 5.90 (Plot XV); 6.00 (Plot XIV); while the deposit was deeper than 6 meters in Plots XII and XXIX. We estimate the height of Mound A to be about 20–25 meters.

As to the building material used for the construction of walls, there was stone and *kerpich* (sun-dried bricks with straw tempering). All the stone walls and the stone foundations of the *kerpich* walls uncovered to date were made of unwrought boulders and slabs of quartzite, sandstone, etc. Only a few wrought stones were scattered about in the débris. That in many cases successive settlers on the mound had re-used the wall stones of earlier buildings was suggested by the ground-off edges of such stones. One may well imagine that in this manner entire buildings of earlier occupations have disappeared.

The most common type of stone wall, encountered at various levels, consisted of border-stones set to form the straight faces of the wall, while the space between the border rows was filled with smaller stones. There were also walls composed of rather large boulders (Plots 20 and XXIII)<sup>1</sup> and others built of equally large rocks with irregular edges (e.g., Plot II, Walls 8–10, apparently of Period II). Exceptionally large boulders were used for the border rows of the town wall uncovered in Plots XXIV, XXX, etc. The stones composing the citadel wall on Mound A were smaller; but the wall itself was considerably thicker than the town wall in Plot XXIV. Large single rocks were also employed as end-stones of some walls in Plots 23, 25, and 26. Only on such rocks artificially smoothed surfaces were noticed. Sections of walls—probably Roman—with exceptionally straight edges were found in Plot XIII. Mortar has been noticed in only two rooms (No. 1 in Plot 40 and another in Plot XIII), attributed likewise to the Roman period. The interstices between the stones of the other walls described were either empty or had been filled with ordinary mud. The foundations of walls of the Osmanli period uncovered in Plots VI, VII, VIII, etc., had been made of upright slabs (as large as .65 × .40 × .25) and of head-sized stones. Other foundations, apparently of the same age, were made of stones set to form an angle (Plot XIII). Some walls were composed of border rows of stones with the space between filled with ordinary dirt (e.g., Plot XV, Walls 1, 2, and 4) instead of stones.

Nearly all the *kerpich* walls had been built on stone foundations the uppermost layer of which consisted of flat slabs, the border slabs being larger than the rest. The best example, for one period at least, presumably the middle or

<sup>1</sup> Arabic numbers represent the mound plots; roman numbers are used for the terrace plots.



belonged to Period I. A rectangular stone box (Plot X Stratigraphic Annex), possibly of Period II, was likewise used as a burial place.

Some door-socket stones were scattered about in the débris; but there was probably none *in situ*, i.e., there was none at a spot suggesting a doorway. The socket stones were identified by a depression smoothed by use and situated in a flat surface. These depressions were about .05-.10 in diameter, while the stones ranged from about .30 to .50.

Fireplaces were in some instances simple depressions; others were made of smooth, plaster-like material, blackened by use (e.g., Plot IV, No. 13). Such a hearth was found in Plot V also (No. 4), but it consisted of successive layers of white, plaster-like material alternating with streaks of ashes and charcoal. As an example of fireplaces in Turkish rooms, the hearth of Plot VII may be adduced. It was built in an opening in the wall, with curved rear made of slabs together with ordinary stones. The bottom was covered with a mosaic of pottery slabs.

Fire pots were uncovered in Plots 6, 25, etc. They were constructed of crude earthenware, brown and brittle, usually without bottom and supplied with an additional clay shell as thick as the wall of the vessel (about .025). While as a rule these pots stood free, in the Turkish room of Plot VII a pot .50 in diameter and .35 deep was sunk into the floor. The other fire pots were all seemingly older than the Roman period.

There was one baking-oven of Turkish-Armenian origin (Plot XIII, No. 9). It had the shape of an inverted cone and was similar in material to the fire pots of older date. Its position was below the floor, while it was connected with the surface by a flue.

A kiln of problematical age occurred in Plot III. It had a semi-oval ground plan with *kerpich* walls .20-.25 thick. The bricks had been burned reddish yellow, apparently by use. The kiln was subdivided into halves and had an opening in the center of the base.

Hand mills and grinders of stone were found in nearly all layers. The former were usually semi-oval, about .50 long, with one slightly curved grinding surface. The hand grinders, by means of which the grain was ground on the mills, had a similar shape; but they were smaller. In the more recent culture layers, more elaborate mills and other domestic furnishings occurred (Plot XX, Room 2, and Plots XXI and 46) in addition to simple forms.

early phase of Period III, is the main *kerpich* wall on Mound B.<sup>1</sup> It was preserved in places to a height of 3 meters, its front being protected originally by a sort of retaining wall made of stone. The second season's work will show whether the bricks of successive levels differ in their dimensions. Their color is as a rule light yellowish brown or yellowish white. In the Period II layer of Plot XXV a *kerpich* wall (No. 15) was uncovered which did not show any brick-marks. It had a gray-brown color and was speckled with white particles. Its contours were determined solely by a light gray coating applied on both faces. A whitish coating 1 centimeter thick was also found on Wall 3 of Plot II.

As to the floors of rooms, they were usually of hard-tramped soil covered by a layer of dark refuse. But there was also a floor made of white *kerpich* soil mixed with small stones on a rubble foundation (Plot XXI, recent building). Again, in Plot XXIII a pavement (No. 5) occurred which had been made mainly of small bits of pottery. A hard, yellowish *kerpich*-like floor was uncovered in the Period I layer of Plot XII. A number of floors were paved with well-selected but unwrought slabs of irregular shapes. They measured roughly from .20 to .70 in length or diameter. Windows or doors were in some cases suggested by gaps in the walls. But in most instances the foundation layers preserved were too low to show openings. Few traces of roofing material appeared. Semi-tubular and trapezoid, almost rectangular, tiles of earthenware filled the apparently Turkish room No. 1 of Plot XX. Elsewhere, only now and then lumps of *kerpich*-like material with impressions of sticks were found in the refuse filling of rooms.

Refuse pits, uncovered in great numbers and employed during all periods, were either cylindrical or bottle-shaped with expanding bottom. They ranged from shallow depressions to a depth of about 2.50. The refuse filling such pits had been covered with earth. The pits contained always loose grayish black soil and broken artifacts, especially potsherds.

Circular structures inclosed by small stones were found in Plot X Stratigraphic Annex and in Plot XXV. While these may have been pits, it is possible that they were storage bins; that of Plot XXV (No. 16) was secondarily used as a burial place. A small semicircular inclosure, built of small stones and tile fragments and leaning against a wall of the Turkish room No. 2 in Plot XX, was probably a storage bin. A rectangular *kerpich* structure in Plot XII (No. 17) was a burial cist; a similar structure in Plot IX was found empty. Both

<sup>1</sup> See pp. 195-99.

Storage vessels, mostly fragmentary, were found in several plots (XX, XXV, etc.).

Cupstones, i.e., stones with artificially made depressions of problematical purpose, occurred on the surface of Plot IX and directly below the surface of Plot XXIV, while a third cupstone lies on the surface at the ruined Armenian village of Manzor Oghlu about 100 meters west of the Alishar mound. The cupstone of Plot IX is approximately  $1.00 \times .70 \times .70$  and has sixteen circular depressions on one side. Their diameters range from .03 to .08, their depths from .01 to .04.

With the domestic equipment may perhaps be included a bath or baptistry (Plot XXIII, No. 16) of Roman or late classical times. It was shaped at the top like a rounded square, its sides converged downward, while there was a shallow circular depression at the bottom, two steps leading down. The walls were made of plaster-like material, a mixture of white *kerpich*, water, and small stones.

Detailed descriptions of the individual plots follow.

#### THE MOUNDS (MAP 4)

##### THE ASCENT OF MOUND B (MAPS 5-6)

In Plots 1-4 we ascended in terrace fashion (Figs. 65-67) the slope of Mound B, the southernmost of three extensions of Mound A. There the laborers were trained who later on formed the nucleus of a considerable crew. Few wall remains were uncovered in these plots, and objects of interest were rare.

PLOT 1 (MAP 5).—There were only two rock-covered areas in addition to two fragmentary walls, each composed of two rows of unworked stones. A stone door-socket was found in the southern patch of irregularly deposited rocks, which, on account of its straight northern edge, suggested a roadbed. Hundreds of potsherds were found, most of them undecorated, but also some sherds glazed in yellow and brown, others with green glaze, pieces of *terra sigillata*, and buff-colored fragments with red or brown-red decoration.

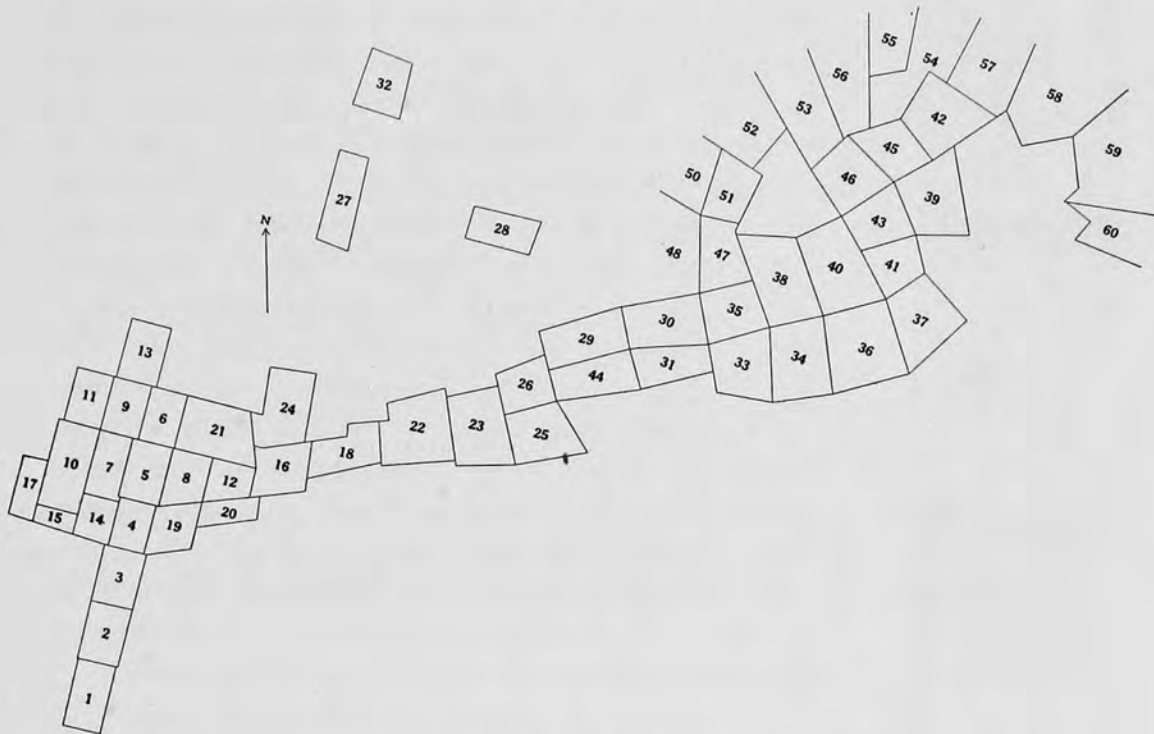
PLOT 2 (MAP 5).—Here another pile of rocks was uncovered which may be the remains of a wall. Several superimposed floors, recognizable by yellowish *kerpich*-like layers interchanging with strata containing ashes, charcoal, and crushed pottery, were in the northwest corner. There was also a cylindrical mass of *kerpich* of problematical use, .30 long and .10 broad. In addition to the sherd types noted in Plot 1, a bilaterally black-polished fragment appeared.

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PLOT 3 (MAP 5).—The wall remains found here were on two levels, the upper represented by Wall 1, the lower by the rest. Those walls marked on the plan by two rows of rocks were of the type described in Plot 1, but in places smaller stones of the size of a fist had been used as filling between the two border rows. The height of the wall remains varied between one and three layers.

MAP 4



THE MOUND PLOTS. SCALE, 1:1,000

There were two one-stone walls, one extending below Wall 1 and in continuation of it, the other from a rock pile covering the north central part of the plot. None of the wall remains uncovered in Plots 1-3 proved sufficiently important to induce us to uncover further plots beside them. It was different in the next plot.

PLOT 4 (MAP 6).—To mention the most important find first, the *kerpich* defense wall was discovered here, although its breadth was not determined until Plot 5 was excavated. Cavities in the north wall of the plot (Fig. 68) made us suspicious. After they had been widened, a hole appeared (Fig. 69) which had



been formed by rocks accidentally piled up. The wall back of this opening, however, consisted of well-set masonry. The rock piles were removed, and the outer face of the defense wall became visible (Fig. 70). At the same time brick-

MAP 5



PLOTS 1-3, ON SLOPE OF MOUND B. SCALE, 1:200

marks had been discovered at the bottom of Plot 5, situated several meters higher up. Not until the entire outer face of the powerful *kerpich* structure had been carefully cleaned did it become clear that the bricks in Plot 5 and the wall at the back of the opening in Plot 4 belonged to the same structure. The former represent the present upper edge of the wall, the latter its stone foundation. The defense wall still rises to a height of 2.90, the stone foundation being .65 high.<sup>1</sup> The stone walls in front of the *kerpich* structure are of the "border-stones and filling" type before mentioned. They form two rectangular inclosures at a level corresponding to that of the stone foundation of the *kerpich* wall. The rock pile filling the northern section of the plot originated in part from a structure which seems to have leaned against the *kerpich* wall, suggesting in places a sheathing for the latter, and in part from the remains of the rectangular inclosures in front. In Plot 4, as previously, the painted buff sherds were the most conspicuous ones. No Roman "fine ware" sherds, *terra sigillata*, etc., were found near the foot of the *kerpich* wall.

#### THE SUMMIT OF MOUND B (MAPS 6-8)

PLOT 5 (MAP 6 AND FIG. 71).—In this plot the top of Mound B was reached at a height of about 10 meters above the bottom of Plot 1. The breadth of the *kerpich* defense wall was here determined, and two patches of pavement (Nos. 1 and 2) were found on a level with the present upper edge of the main *kerpich* wall. The pavement consisted of carefully selected but unworked flat slabs, polygonal, rectangular, and rounded. There were stones as long as from .50 to .70 and others only .15 or .20 long. On a level just above the pavement a charcoal layer .03-.10 deep was visible on the walls of the plot.

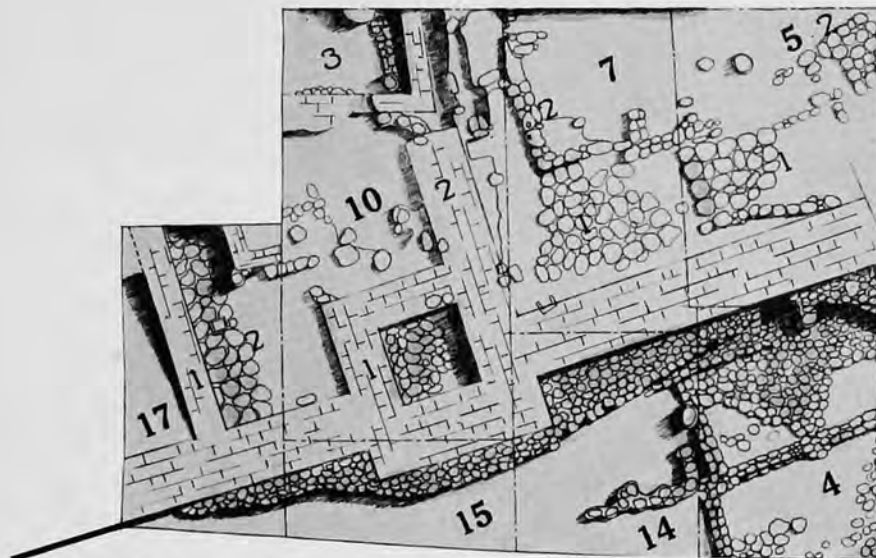
<sup>1</sup> See pp. 195-99 for detailed description of the *kerpich* defense wall.

## THE EXCAVATED AREAS

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PLOT 7 (MAP 6).—In Plot 7 another paved area (No. 1) was uncovered, separated from Pavement 1 in Plot 5 by an empty space, where probably a *kerpich* wall had stood. A fragmentary stone wall bordered the paved area on the north and abutted a wall fragment extending south-north. At the south end of this wall a door-socket and a hand mill had been used secondarily as wall stones. The hand mill had a semi-oval cross-section with concave grinding surface and a perforation near one end. A similar grinder was situated on Pave-

MAP 6



PLOTS 4-5, 7, 10, 14-15, AND 17, ON SUMMIT OF MOUND B. SCALE, 1:200

ment 1 in an inverted position. A *kerpich* wall, recognizable by some brick-marks, bordered the plot at its north end. In the southern section the continuation of the main *kerpich* wall was traced.

PLOT 10 (MAP 6).—A tower (No. 1) of the defense wall, uncovered in this plot, as well as other details of this structure, are dealt with in a separate description on page 195 (Tower *a*). The upper edge of the main wall was here hardly covered by the grass growing on the *hüyük* surface. From the east wall of the tower a broad fragment (No. 2) of a *kerpich* wall could be followed for a short distance. Part of a room (No. 3) inclosed by narrow *kerpich* walls was uncovered in the northwest corner of the plot. As to the rest, the situation was rather obscure. *Kerpich* fragments bordered the east wall of the plot, and rocks were lying about which may have represented remains of walls.

THE ALISHAR HÜYÜK



FIG. 65.—BEGINNING EXCAVATION ON MOUND B. PLOTS 1 AND 2, WITH MOUND A TO THE RIGHT



FIG. 66.—PLOTS 1-4

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PLOT 17 (MAP 6).—In this plot the course of the *kerpich* wall was better defined by the rocks bordering its southern edge than by the brick-marks. The latter were exceedingly indistinct. A narrow *kerpich* wall (No. 1) abutted the main wall from the north and bordered a paved area (No. 2) which also reached to the main wall.

PLOTS 14 AND 15 (MAP 6).—In these two plots the southern edges of the defense wall and of Tower 1 of Plot 10 were followed. At an average depth of



FIG. 67.—PLOTS 1 AND 2

.50 below the upper, outer edge of the *kerpich* wall, a rock pile accompanied the latter, a phenomenon paralleled all along the extent of the wall.

PLOT 6 (MAP 7).—Pavement 2 in Plot 5 was separated from Pavement 1 in Plot 6 by a space .50-.70 wide. In this space, as well as on a line following the long axis of these plots, fragments of *kerpich* walls were uncovered, suggesting that the paved areas had been inclosed by such walls. This was later on actually found to be the case in the adjoining Plot 21. The *kerpich* bricks were grayish yellow. Their average dimensions were: length, .36; breadth, .20; height, .09.



THE ALISHAR HÜYÜK



FIG. 68.—PLOT 4. CAVITIES IN THE NORTH WALL



FIG. 69.—PLOT 4. ROCK PILE IN FRONT OF STONE FOUNDATION OF MAIN KERPICH WALL

THE EXCAVATED AREAS



FIG. 70.—PLOT 4. FRONT OF MAIN KERPICH WALL



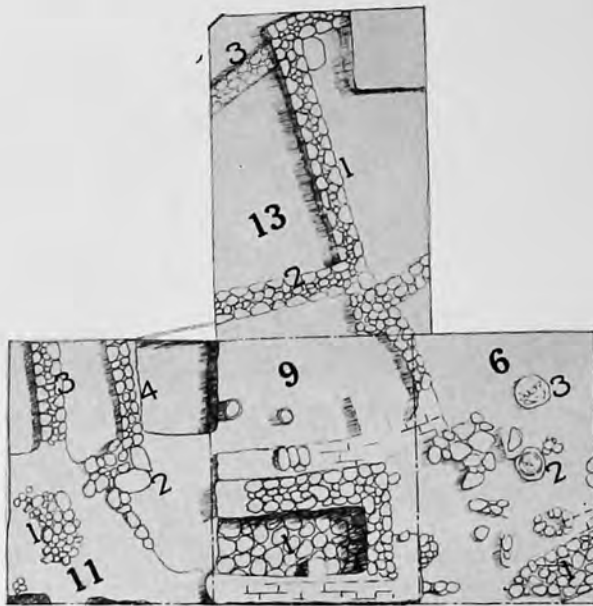
FIG. 71.—PLOT 5. PAVEMENT

## THE ALISHAR HÜYÜK

Two broken pots of crude earthenware (Nos. 2 and 3) were situated .50 below the level of the pavement. They were fire pots enveloped in a clay shell and containing some ashes and charcoal (Fig. 72). The wall of Pot 2 was .03 thick; the clay shell, .025. The diameter was .55. The vessel was brittle, with brown exterior and blackened interior. Pot 3 was of the same type as the former, but its fragments lay upside down.

PLOT 9 (MAP 7).—The *kerpich* walls in this plot were difficult to define. The entire northern section seemed to consist of a *kerpich* layer. However, no brick-

MAP 7



PLOTS 6, 9, 11, AND 13, ON SUMMIT OF  
MOUND B. SCALE, 1:200

marks could be found. Within a narrow room (No. 1), inclosed by the remains of *kerpich* and stone walls, the excavation was carried to a depth of 2.30. There a stone pavement was struck, of a type identical with the pavements in Plots 5, 6, etc., but belonging, of course, to an earlier occupation. A definite change in the type of objects could not be noticed because the area was too small.

PLOT 11 (MAP 7).—In Plot 11 an area (No. 1) covered with irregularly distributed rocks adjoined a spot (No. 2) which had the appearance of a pavement. The upper edge of a wall (No. 3) was on the level of these two areas, but the wall extended considerably below it. This wall, as well as Wall 4, was of the common type—large border-stones with a filling of fist-sized stones.

THE EXCAVATED AREAS



FIG. 72.—PLOT 6. TWO FIRE POTS



FIG. 73.—PLOT 13. START OF WORK



THE ALISHAR HÜYÜK



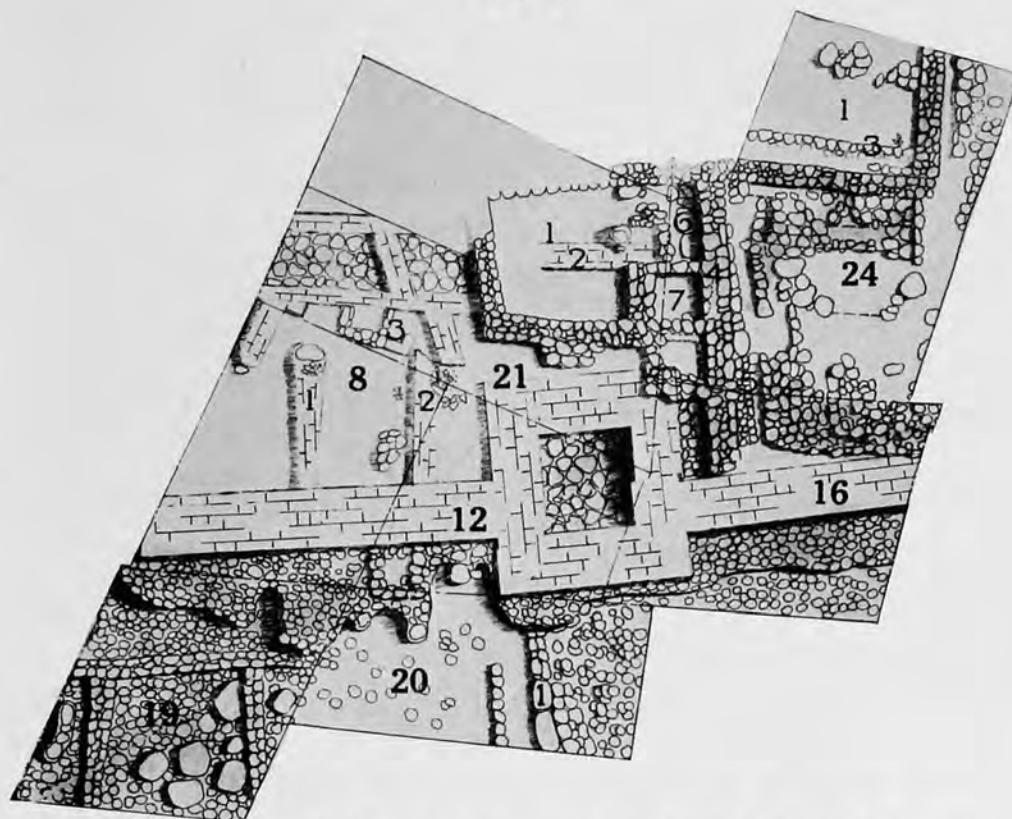
FIG. 74.—PLOT 13. ROOM-SECTIONS



FIG. 75.—PLOT 13. WALL 1

PLOT 13 (MAP 7 AND FIGS. 73-75).—A little below the surface the upper edges of several stone walls were struck. They represented the foundations of a structure to which Walls 3 and 4 of Plot 11 seemingly belonged. Wall 1 was especially well set. On its top the remains of a second, narrower wall were found. Walls 2 and 3 had a substructure of bowlders on which a layer of flat slabs was situated. Wall 3 had, besides that, a top layer of *kerpich*.

MAP 8



PLOTS 8, 12, 16, 19-21, AND 24, ON SUMMIT OF MOUND B. SCALE, 1:200

At an average depth of .95 a hard layer of *kerpich*-like soil was struck, a floor seemingly, on top of which a silver drachma of Philip Arrhidaeus (Field No. 267) was found. A little below the level of the coin, but on the opposite side of the wall, the head of a ram (Field No. 275), made of pottery, and half a pottery plate (Field No. 274) with smooth brown exterior were uncovered.

PLOT 8 (MAP 8).—Here an offset or saw-tooth edge of the defense wall appeared. From the latter, two narrow walls (Nos. 1 and 2), of the same com-

position, extended toward the north. They abutted, however, the upper edge of the defense wall. For this reason they must be considerably more recent than at least the lower part of the main wall. Since we have not yet penetrated to the foundation of the defense wall inside the area inclosed by it, all the structural remains situated on our map north of the main wall belong to an occupation later than that which it represents. As a rule, the foundations of these structures were little below the present top of that wall.

In this plot a superposition of floors and of some vessels associated with them was noticed. At depths of .30 and .45, respectively, below the surface an oddly shaped vessel (Field No. 155) and a fragmentary pot (Field No. 156) with a zigzag band in relief were uncovered above a thin charcoal layer. At a lower level, 1.55 from the surface, a fine broken polychrome vessel (Field No. 184) was found in the vicinity of some shapeless pieces of iron. The first-mentioned pots seem to belong to the Roman occupation; the polychrome vessel, situated on a level with the upper edge of the main inclosure, may belong to the late part of our preclassical Period III. Such pottery as may be found near the base of the main *kerpich* wall inside the inclosure will indicate during which of our local periods this structure was built.

PLOT 12 (MAP 8 AND FIGS. 76-77).—The second tower of the defense wall was discovered here. The outer border of the main *kerpich* wall was lined here as usual with irregularly deposited stones, not in the form of a wall, but faithfully following the course of the *kerpich* inclosure. Above the present upper edge of the tower a slender vase (Field No. 231) was uncovered at a depth of .90.

In the tower room, the floor of which was paved with stone slabs, a number of objects were found at a depth of from 1.70 to 2.00 measured from the present edge of the tower. There were fragments of iron (Field No. 246), an iron spear head (Field No. 247), crude clay rings (Field No. 248), many sherds decorated with either red, red-brown, or brown patterns on a buff ground, and also a small bottle-shaped vessel (Field No. 332) of a type which only at this spot has been found associated with the Period III buff wares. It is quite possible that the defense wall and the towers were re-used at successive periods and that several floors will be found within the towers. That question will be solved during a subsequent working season.

PLOT 19 (MAP 8).—In Plot 19 the stone structure uncovered in Plot 4 was continued. The walls were difficult to trace because a rock talus sloped down

from the defense wall and masses of irregularly piled rocks, including some boulders of considerable size, extended through the entire plot. The rocks bordering the *kerpich* wall did not reach to the bottom of the excavation, i.e., to the level of the stone walls and the stone-covered areas they inclosed. This indicates that the rocks (No. 1) were the remains of a structure which crumbled after the stone structures in front of the wall had been covered with soil.



FIG. 76.—PLOT 12. TRACING THE MAIN KERPICH WALL

PLOT 20 (MAP 8).—In the eastern part of the plot, south of the tower of Plot 12, the situation paralleled that of Plot 19. A cross-section would show a rock talus leaning against the *kerpich* wall 1.00 below its edge. These rocks rested on a block of soil 1.65 high covering the northern section of Wall 1 and a lower talus of rocks which extended east of this wall.

Wall 1 was composed of rather big boulders, their smooth surfaces turned toward the west and forming a straight edge. One of the wall stones measured  $1.40 \times .53 \times .63$ . A single row of stones accompanied Wall 1 on the west.

PLOT 21 (MAP 8).—The upper edges of the walls inclosing Room 1 were struck at a depth of .50 below the surface. While digging inside this inclosure,



the number of sherds and other specimens soon increased; and at a depth of 1.60–2.00 below the edge of the south wall a layer of soil was found, black with charcoal and decayed vegetable substance. Here a number of crushed pottery vessels were found *in situ*, e.g., two plain pitchers with trefoil orifices (Field Nos. 449–50), many sherds of painted buff ware, and also iron and bronze objects. No fireplace was found.



FIG. 77.—PLOT 12. FLOOR LAYER INSIDE OF TOWER

Below this floor layer a *kerpich* wall (No. 2) extended through the center of the room. It was composed of three rows of bricks and probably was part of a structure more ancient than Room 1.

In the western section of the plot the continuation of Pavement 1 of Plot 6 was uncovered, bordered at both sides by *kerpich* walls. A narrow band of *kerpich* extended across the pavement and connected the two walls. Outside the southern wall a rectangular spot (No. 3) of yellow soil, inclosing ashes, suggested a hearth.

PLOT 24 (MAP 8 AND FIG. 78).—The situation in this plot was complicated on account of the presence of many structural remains, stone walls and pave-

ments, at various levels. Part of a room (No. 1) connected with Room 1 of Plot 21 was excavated in the northern part. The south wall (No. 2) of this room, however, was accompanied by another stone wall (No. 3), the upper edge of which was situated about 1.00 below that of Wall 2, while its base was as much below the foot of the latter. Short wall fragments and sections of pavements were in the northeast corner of the plot and in the center, at the level



FIG. 78.—PLOT 24. SUPERPOSITION OF WALLS 2 AND 3

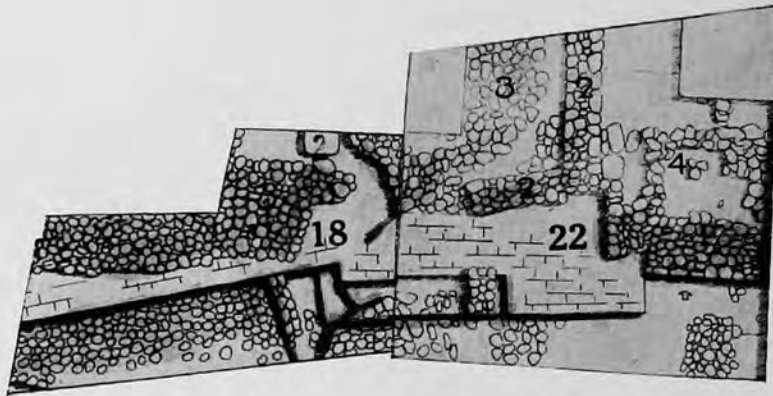
of the upper edge of Wall 2. The latter was separated from the pavement situated south of it by a narrow *kerpich* wall. But Wall 2 extended considerably deeper than the *kerpich* wall and the pavement, and is probably older than either of them. Wall 4 abutted Wall 2 at the north and the defense wall at the south. It was superimposed on another stone wall (No. 5), the direction of which deviated but little from that of Wall 4. On top of the latter was a short wall fragment separated from the underlying wall by a thin layer of soil.

To the west of the northern part of Wall 4 there was an arrangement of slabs (No. 6) suggesting a step. A small rectangular inclosure (No. 7) was situated in the southeast corner of Room 1 of Plot 21.

At the deepest point of the excavation, namely in Room 1, as well as at spots nearer to the surface, painted buff sherds of Period III were found. No change in types of objects could be noticed as the depth increased.

PLOT 16 (MAP 8).—The eastern part of the tower found in Plot 12 was here uncovered. The continuation of the *kerpich* wall toward the east was flanked on both sides by rock piles—those south of it somewhat below, those north somewhat above, its present edge. However, the rocks situated north of the wall, in contrast to those bordering it on the outside, had probably not been connected

MAP 9



PLOTS 18 AND 22, ON SLOPE OF MOUND A. SCALE, 1:200

with it. Among the latter there were a number of bowlders bigger than the average.

The *kerpich* wall had here a considerable grade, since in this plot the slope of Mound A started. The summit was not reached until Plot 30. Between the east wall of the tower and a stone wall (Plot 24, No. 4) abutting the defense wall on the north, a narrow, slab-covered area was found.

#### THE ASCENT OF MOUND A (MAPS 9-10)

PLOT 18 (MAP 9).—The fortification wall was here followed up-hill. In part it almost disappeared underneath the continuation (No. 1) of the rock pile which had bordered it on the north in Plot 16. These rocks were remains of a structure later than the *kerpich* wall. A large bowlder (No. 2), artificially smoothed, with a square top and trapezoid cross-section, protruded into this plot from the north wall. It may be an end-stone of a wall, like those encountered in Plots 23, 25, etc.

PLOT 22 (MAP 9 AND FIGS. 79-80).—In this plot the defense wall broke off. We had expected to find a tower here, but there was no opening in the broad block of *kerpich* with which the wall ended. Its stone foundation (No. 1) was continued for a short distance, but it could not be traced much beyond the line between Plots 22 and 23.

The south wall of a room (No. 2) flanked the *kerpich* wall on the north. The rock talus (No. 3) west of the stone walls had been formed by the crumbling



FIG. 79.—PLOT 22. FRONT OF MAIN KERPICH WALL AT POINT WHERE IT ENDED

walls of that room. These walls (No. 2) had a considerable breadth and were of the common "border-stones and filling" type. The wall fragments No. 4 were at a somewhat lower level than Walls 2.

In this plot, as well as in Plots 11, 13, and 21, a block of soil was left for subsequent stratigraphic sherd studies. It was self-evident that our knowledge of the ceramics and other artifacts belonging to the successive layers of the mound would increase with the progress of the excavation and that much additional information about the affinity of certain structural remains would be gained



by re-examining the soil covering these structures. For this purpose the stratigraphic test blocks were left untouched, to be sectioned as described on pages 214-16.

The plan of Plots 23, 25, and 26 (Map 10) shows a number of narrow room-divisions inclosed by stone walls and oriented in a uniform way with the exception of Room 1 in Plot 25.

PLOT 23 (FIGS. 81-82).—The walls of the narrow room-sections here uncovered were relatively broad and strong. As end-stone of Wall 1 a large boulder



FIG. 80.—PLOT 22. STONE PILE 3 AND WALLS 2; WORK IN PLOT 23 STARTED; MOUND A IN BACKGROUND (FROM WEST)

with artificially smoothed upper surface and front had been used. Both Wall 1 and Wall 2 broke off where the continuation of the defense wall would be expected; but there was no trace of the latter.

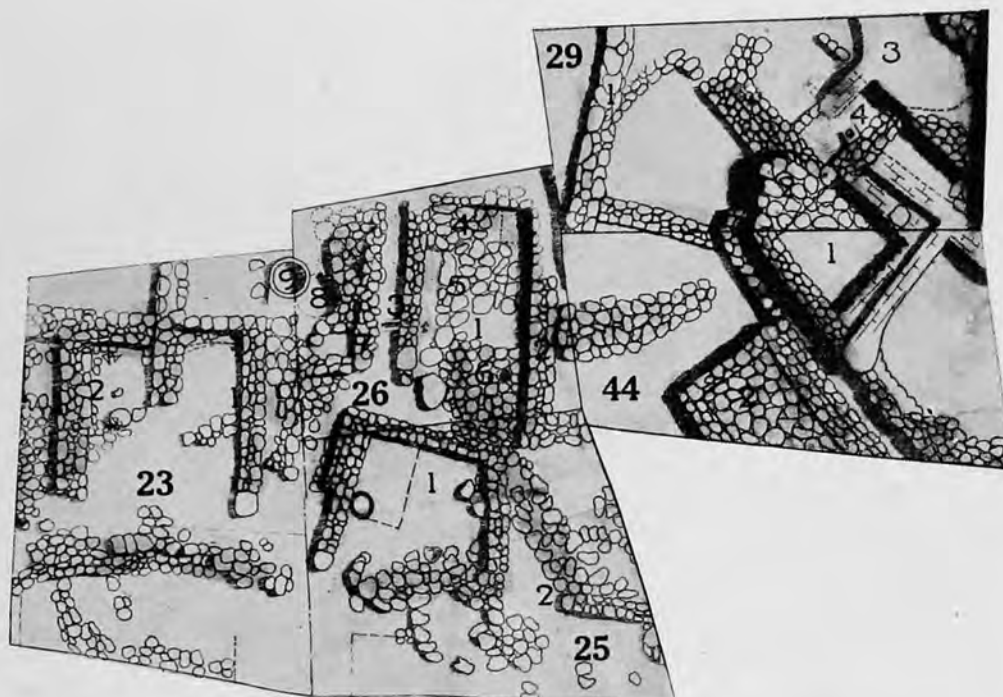
Half of a plain bowl (Field No. 560) was situated on top of Wall 2, along with a plate (Field No. 561). At about the same level, but inside the inclosure, a hand mill was found, a stone slab with slightly concave grinding surface but without raised margins.

## THE EXCAVATED AREAS

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Painted sherds of Period III were frequent near the bases of the walls. Lumps of iron, bronze objects, and spindle whorls of stone and clay were found, but also sherds of presumably Roman origin, one-half of an eye bead, a tubular blue glass bead, a small Roman coin (Field No. 519) at a depth of 1.80 below the surface, east of Wall 1, and even a Seljuk coin (Field No. 555). The latter, however, was in the soil which had been thrown out. This series of objects indicates

MAP 10



PLOTS 23, 25-26, 29, AND 44, ON SLOPE OF MOUND A. SCALE, 1:200

that it is difficult to determine the origin of structures situated on a steep slope, because specimens belonging to different periods can easily become mixed.

PLOT 25.—Room 1 (Fig. 83), though situated at approximately the same level as the rooms of Plots 23 and 26, seemed from its different orientation not to have been built at the same time with them. Its type of walls, however, was the same as that of the other rooms, and its west wall was also supplied with a large end-stone. The walls were preserved to a height of .75-1.50.

A crude, bottomless fire pot (Fig. 84), enveloped, like the vessel of Plot 6, by a clay shell, leaned against the west wall, on a level with its present upper

edge. Distinct charcoal strata extended to a depth of .50 below its base. The bottom of a storage vessel (Field No. 661) stood north of the remains of the broken-down south wall, and was filled with fine, yellowish soil.

Reddish yellow layers of *kerpich*-like soil, interchanging with strata of charcoal and ashes, were uncovered in the southern part of the plot. A wall fragment (No. 2) protruded from the east wall of the plot. This wall and the rock pile north of it were on a somewhat higher level than Room 1.



FIG. 81.—PLOT 23. VIEW OF WALLS; START OF WORK IN PLOT 25 (FROM WEST)

PLOT 26.—Wall 2, which almost reached the northeast corner of Room 1 of Plot 25, proved to be of considerable height (Fig. 85). It may have been built up in successive stages. Its entire southern section was composed of small stones, while the remainder had been built in the following manner. A layer of comparatively small stones was used from the bottom upward to a height of 1.15, followed by a layer of big rocks averaging .30 in height. On top, another layer of smaller stones was visible, separated from a fourth section, which also consisted of small stones, by a layer of *kerpich*-like soil .10–.15 thick. Finally, on top of the wall was found a *kerpich* layer about .20 high.

This wall formed the east side of Room 1. Another end-stone of considerable size terminated the west wall (No. 3). The walls of Room 1 were somewhat terraced, Wall 3 reaching deeper than Wall 2. For this reason a pavement (No. 4) of stone slabs abutted Wall 3 considerably above its foot, though level with the base of Wall 2. Another paved area (No. 5) extended somewhat below the level of No. 4 and was separated from Wall 3 by a band of *kerpich* on top of which a fragmentary plaquette of pottery was found (Field No. 690), 1.25



FIG. 82.—PLOT 23. END-STONE OF WALL 1

below the upper edge of Wall 3. It had a bird design and was decorated with grayish black and brown-red on a light buff wash.

A hole (No. 6) containing ashes and charcoal and inclosed by a band of yellow soil was situated in the southeast corner of the room at about the same level as Pavement 5. It suggested a hearth (Fig. 86). The rest of this part of the room was filled with rocks.

Wall 7 extended parallel to Wall 3 but was separated from the latter by an empty space in which masses of charcoal and a charred beam were found. Somewhat below the upper edge of Wall 7, and accompanying it on the west,



there was a narrow paved area which covered part of the easternmost (No. 8) of two pits (Fig. 87). Both were almost tubular holes with slightly convergent orifices. Pit 8 was 1.15 deep, its bottom 1.40 below the pavement. Pit 9 was built later than Pit 8. It was only .50 deep and was situated higher up. Some ashes and charcoal were found in both of them. They were walled with *kerpich* bricks, especially well defined in Pit 9. The average dimensions of the grayish yellow bricks were as follows: length, .36; breadth, .17; thickness, .10. The floors of the pits were of hard, *kerpich*-like soil.



FIG. 83.—PLOT 25. UNCOVERING ROOM 1 WITH FIRE POT AND STORAGE VESSEL

PLOT 29 (MAP 10).—A number of superimposed wall fragments uncovered here will become clear only after the adjacent areas have been excavated to the same level.

Wall 1 was situated somewhat higher than Wall 2 of Plot 26 and was partly composed of large boulders. Approximately on the same level were a pavement (No. 2) and the top of a *kerpich*-like block of soil (No. 3) of problematic purpose. Pavement 2 extended on top of the north end of Room 1 in Plot 44 ad-

## THE EXCAVATED AREAS

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joining. The remaining wall fragments were all at a considerably lower level. A door-socket (No. 4), a well-worked, rectangular white stone, was situated



FIG. 84.—PLOT 25. CLOSE-UP OF FIRE POT WITH STRATIFICATION BELOW IT



FIG. 85.—PLOT 26. WALL 2 FROM WEST

## THE ALISHAR HÜYÜK

2.50 below the level of Pavement 2 and 4.00 below the surface, which had a considerable slope.



FIG. 86.—PLOT 26. HEARTH



FIG. 87.—PLOT 26. PITS 8 AND 9 (FROM NORTH)

Painted sherds of Period III were frequent, but a decrease of this pottery was noticeable toward the bottom of the excavation. A coin of Constantius II (Field No. 744) was found 2.00 below the surface as measured from the north wall of the plot.

PLOT 44 (MAP 10).—Room 1 was a small, almost square inclosure. Its walls had still a height of 1.50–1.70. *Kerpich* layers still covered two of these walls, and it is probable that the other two walls also simply represent stone foundations. In the floor layer of this room, at a depth of 1.10–1.40 below the edge of the northwest wall, three vessels were uncovered: a small brown-red pitcher (Field No. 3226), a cup (Field No. 3227) with a band of lozenges in brown-red on a reddish slip, and a second cup (Field No. 3228) with simple brown-red bands on a light-brown surface. A brittle brown earthenware ladle (Field No. 3307), with bronze stains on its concave side, was found at a depth of 1.50.

This room was actually situated below the level of the foot of the citadel wall, which was uncovered a few meters east of Plot 44. However, it is hard to say at present to what extent structures of the same period had been built at different levels on the slope of the main mound. The widening of the excavated areas during the following season will give information on this point.

#### TEST PLOTS ON MOUND C (MAP 11)

To the north of the general excavations, test plots Nos. 27, 28, and 32 were excavated in Mound C, the central one of the three hillocks extending westward from Mound A.

PLOT 27.—Many small stones filled the top layer, of about 1.00 in thickness. They had probably rolled down the slope of Mound A, at the foot of which the plot was excavated.

Part of a room was here uncovered, inclosed by stone walls of the "border-stones and filling" type. In the center there was a pavement which extended almost to two large boulders (Nos. 1 and 2) artificially smoothed and uniformly oriented. A layer of *kerpich* connected them and extended toward the north, abutting a third stone (No. 3), rectangular, with smooth surfaces and with a rectangular depression in its north face (Fig. 88). In addition to the depression, which was .22 wide and .12 deep, two grooves extended along the edges of that face, a third groove connecting one of them with the depression. The rock had the appearance of a re-used pedestal.

A mixture of Roman and Period III sherds was taken from this plot.



## THE ALISHAR HÜYÜK

PLOT 28.—This plot (Fig. 89) lies on the slope of Mound A. Only piles of rocks were uncovered, which had fallen from some structure situated farther

MAP 11



PLOTS 27, 28, AND 32, ON MOUND C. SCALE, 1:200

up-hill. But it is self-evident that many structural remains exist in the 10 meters or so of culture deposit present below their level. However, even rock

piles may furnish clues. For that reason we left them to be excavated at some future time along with the adjacent territory.

In this plot a stamp seal (Field No. 737) was found, with an incised representation of a stag whose antlers inclosed a star.

Plot 32.—Room 1 in this plot (Figs. 90–91) much resembled the room in Plot 27. Here, too, three good-sized bowlders were connected by a *kerpich* wall



FIG. 88.—PLOT 27. STONE WITH DEPRESSION AND GROOVES

(No. 4), but in part by a stone wall instead (No. 5). A paved area (No. 6) represented the floor of the room, bordered on the west by a stone wall (No. 7). A fragmentary wall (No. 8) was superimposed upon another stone wall (No. 9) separated from the former by a layer of *kerpich*-like soil. A *kerpich* wall (No. 10) built on a stone foundation represents, together with Wall 9, an earlier structure than Room 1.

It was noticed in this plot that the Period III painted pottery decreased toward the bottom of the excavation, which at its lowest point was 5.00 deep. It may be that we were here approaching an underlying layer of Period II,

where painted wares are entirely absent except perhaps for a type with crude band decoration.

THE SUMMIT OF MOUND A (MAP 12)

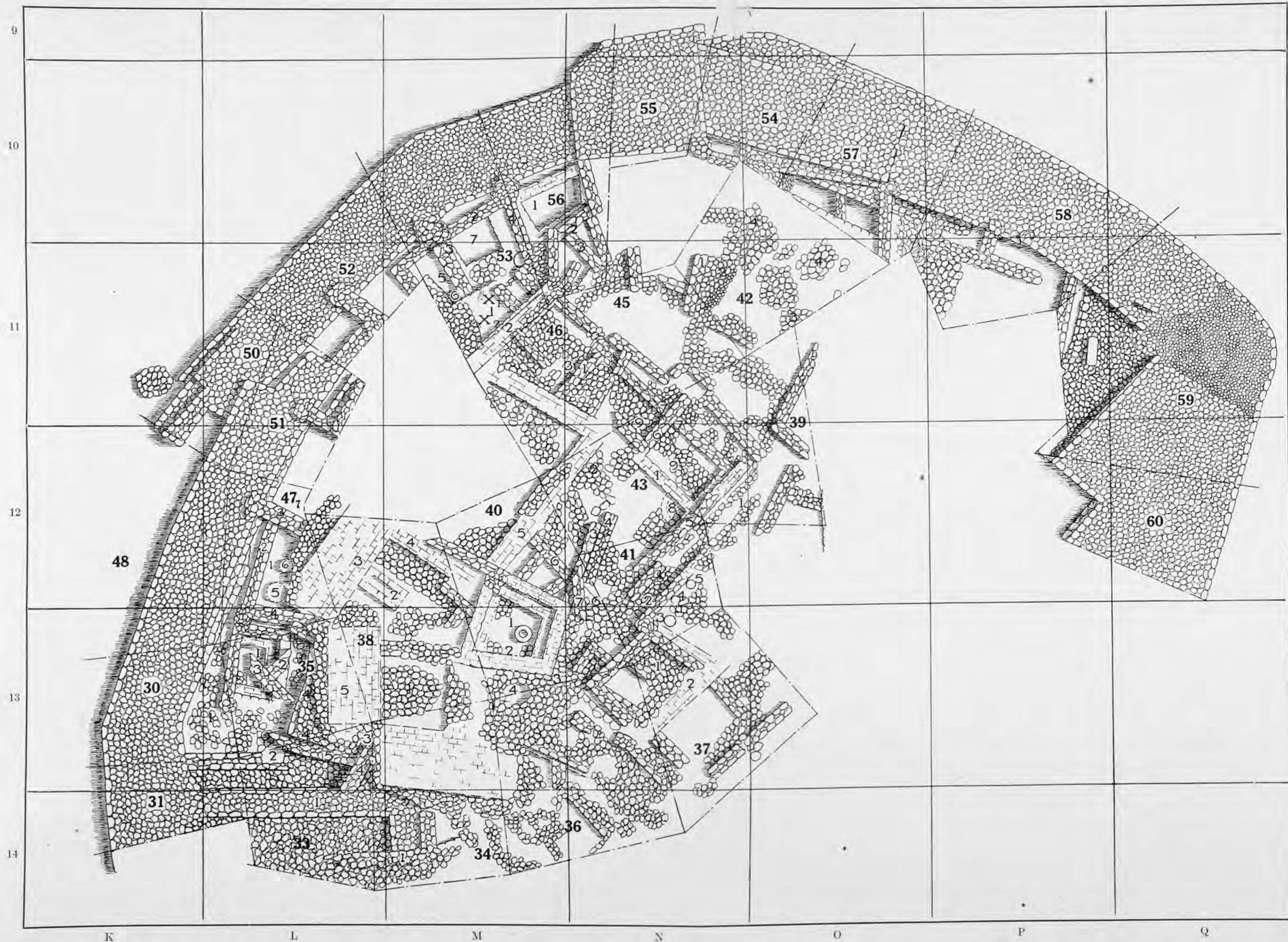
PLOTS 30-31.—In addition to finding the strong *kerpich* wall on Mound B, we discovered a second important structure in Plots 30 and 31, excavated right below the blunt edge of the flattened top of Mound A. Almost the first blows of



FIG. 89.—PLOT 28. VIEW FROM WEST

the laborers' picks struck rocks covered by only a thin layer of surface soil. The entire area uncovered in these two plots was one pile of rocks of all sizes (Fig. 92). By following up faint traces of straight edges, a long wall-front was uncovered (Fig. 93). It extended nearly south-north in Plot 31, but turned north-eastward in Plot 30. Running parallel to the section uncovered in the latter plot, another wall-edge was found 4.00 east of the former. In the very beginning we did not realize that we had found part of a powerful fortification. But this became clear when no intermediate wall-edges were found between the two parallel edges, and especially when a wall-front 2.65 high literally emerged from





PLOTS 30-31, 33-43, 45-48, AND 50-60, ON SUMMIT OF MOUND A. SCALE, 1:200. THE SQUARES DESIGNATED BY THE MARGINAL LETTERS AND NUMBERS WERE PLOTTED DURING 1928 AND WILL BE REFERRED TO IN LATER VOLUMES





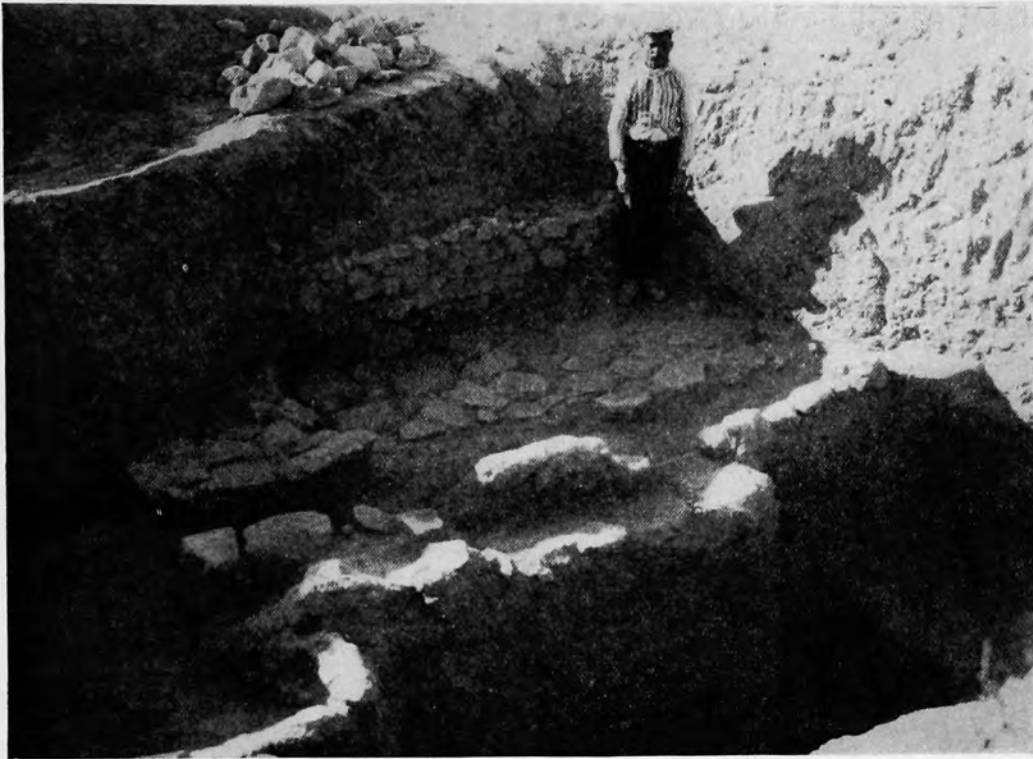


FIG. 90.—PLOT 32. PAVED ROOM (FROM SOUTHEAST)



FIG. 91.—PLOT 32. SOUTHEAST CORNER WITH SUPER-POSITIONS

the rock pile in Plot 31 and was continued in Plots 33 and 34. It was obvious that the last-mentioned wall had been in connection with the band of rocks 4.00 broad uncovered previously. When later on the latter was followed toward the north, its character as part of a powerful citadel which in pre-Roman times had crowned the top of Mound A was finally established.<sup>1</sup>

It was a particularly interesting fact that behind the inner edge of the citadel wall in Plot 30 appeared a layer of rocks, potsherds, and other objects (No. 1)



FIG. 92.—PLOTS 30-31. UNCOVERING THE TOP OF THE CITADEL WALL

entirely blackened by a violent fire (Fig. 94). Even charred grains of wheat and barley were found in the remains of one pot! It was clear that this part of the settlement or fortress had been destroyed by fire, a fact which was confirmed by identical discoveries during later work along the citadel wall. Everywhere along the inner edge of the wall black and charred objects were found.

On the burned, hard floor of Plot 30, two Period III vessels were found: a pot of peculiar form (Field No. 790) with two handles, its decoration of red-brown on light buff being visible at spots where the surface was not discolored by fire,

<sup>1</sup> For full description of citadel wall see pp. 199-213.

THE EXCAVATED AREAS



FIG. 93.—PLOTS 30-31. FRONT OF CITADEL WALL

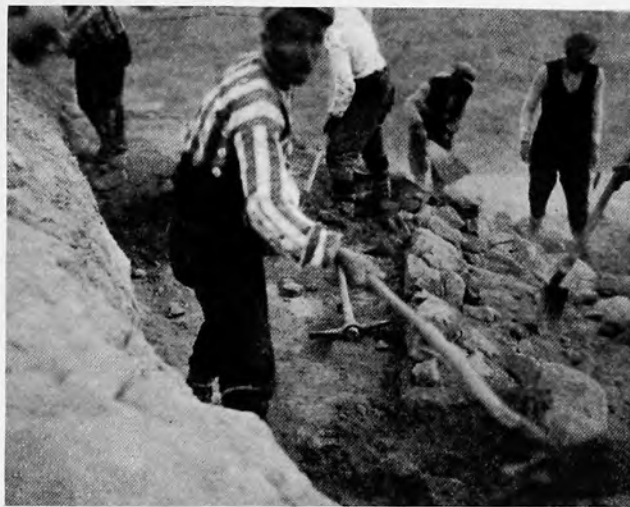


FIG. 94.—PLOTS 30-31. BURNED STRATUM BEHIND CITADEL WALL



and a bowl (Field No. 802) with some rim designs, also a mace head of diorite (Field No. 792) blackened by fire.

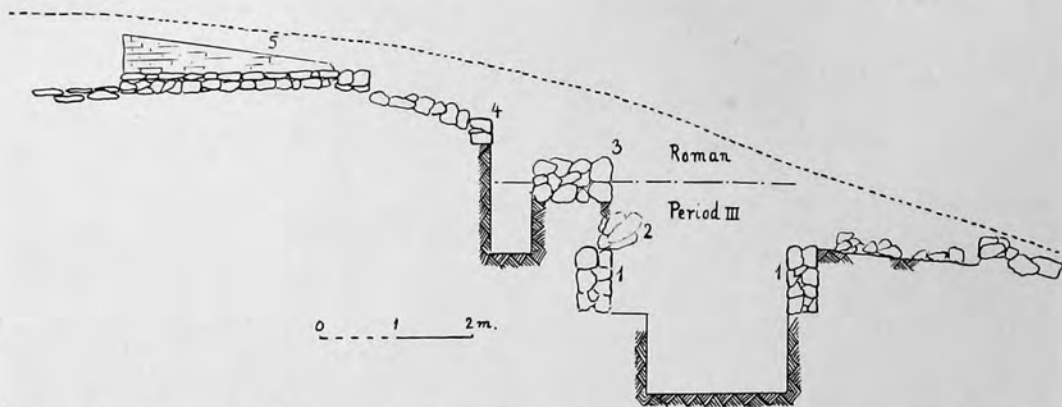


FIG. 95.—PLOTS 30, 35, AND 38. DIAGRAM OF SUPERPOSED WALLS OF ROMAN PERIOD AND PERIOD III



FIG. 96.—PLOT 38. NORTH ROOM WITH WALLS 2-4 (FROM SOUTHWEST)

PLOTS 35 AND 38.—East of Plot 30, what seemed to be a tower room (Plot 35, No. 1) was uncovered within the fire-blackened area. A *kerpich* ledge ac-

## THE EXCAVATED AREAS

accompanied three walls of the room on the inside. The position of this room, as well as the situation encountered when the excavation was carried over the edge of the mound top, is illustrated in Fig. 95. There were actually five superpositions of structural remains, represented by the walls of the tower room (No. 1) and by Walls 2-4 (Fig. 96) and 5. The last was the west wall of Room 1 of Plot 38. However, in spite of the five superpositions, only two culture periods could



FIG. 97.—PLOT 38. SOUTH ROOM (NO. 1) FROM NORTHEAST

be recognized: Period III and the Roman. The approximate line of demarcation between the layers of these periods is marked on Fig. 95.<sup>1</sup>

The principal clue for determining the layers was the pottery. Painted Period III pottery was frequent in Room 1 of Plot 35 and on the burned floor surrounding it, while Roman fine wares were absent in the room and almost lacking even just above the burned floor. The pottery situation was reversed in the layer attributed to the Roman occupation. Besides that, in Plot 38 a coin of

<sup>1</sup> During the second working-season it was confirmed that the line of demarcation is correct. However, all the structural remains entered on the cross-section are pre-Roman! Only the refuse stratum covering them and partly filling Room 1 of Plot 38 originated in Roman times.

Constantine (Field No. 1050) was found. Roman glass beads started to appear here; and, in the structures situated east of Room 1 of Plot 38 and on the same level, great numbers of Roman potsherds, glass sherds, and glass beads were found. These objects left no doubt that Mound A had last been occupied during the Roman period, although the architectural remains did not furnish any clue.<sup>1</sup> The stone walls, as well as most of the *kerpich* walls uncovered on top of the mound, were built after the style of those found during the preceding exca-



FIG. 98.—PLOT 40. TRACING THE KERPICH WALLS OF ROOM 1

vations, and no distinctive ground plans of buildings could be determined among the masses of more or less obliterated wall remains. However, there were several interesting rooms.

The *kerpich* walls of Room 1 in Plot 38 (Fig. 97), extending into Plots 34 and 35, were hardly covered by the surface soil. They were built on a foundation of flat slabs which rested on more irregularly shaped rocks. The breadth of these walls was considerable. Although the bricks along their outer edges had weathered off, the extent of the stone foundation indicated that the walls were

<sup>1</sup>The one coin was the only Byzantine object found on Mound A.



FIG. 99.—PLOT 40. HEARTH IN ROOM 1



FIG. 100.—PLOT 40. STONE DOOR-SOCKET, WORN THROUGH



approximately 2.85 broad.<sup>1</sup> It is possible that the east and north walls, too, of this room had once been covered with *kerpich*, although stone wall fragments extended to the height of the *kerpich* walls.<sup>2</sup> The floor of the room was covered with a slab pavement. The position of the room, as well as the dimensions of its two most exposed walls, suggested that it had been a guard room or tower. Its present depth varied between .80 and 1.25.

A similar room (No. 2) was uncovered north of Room 1. However, it was oriented in a different way. The *kerpich* wall No. 3 was built after the same



FIG. 101.—PLOT 40. PIT 4 AND PAVEMENT 3

pattern as those described in Room 1. Pavement was preserved in parts of the room on both sides of a short *kerpich* wall extending from the center of Wall 3, which abutted on an identical wall (No. 4).

PLOT 40 (FIGS. 98-101).—Room 1 here was of trapezoid shape, inclosed by *kerpich* walls 1.35 broad at an average. However, its outer half was raised .10 above its inner part. The south wall of this room was somewhat uncertain. There may have been an opening (No. 2), as indicated by an interruption of the

<sup>1</sup> During the second working-season the explanation for the extraordinary apparent breadth of these walls was found. Their actual breadth was 1.00 at an average; but their outer contours had entirely disappeared and faded into broad, solid *kerpich* layers formed by disintegrated and tumbled-down bricks. These *kerpich* layers covered two narrow rooms, one to the west and one to the south of Room 1 in Plot 38. The situation was exactly paralleled in Room 2 of the same plot. Here too, the broad *kerpich* layer covered a narrow room west of Room 2. As to the east and north walls of Room 1, they were originally *kerpich* walls like the others, but at a subsequent time stone walls had been built on their remains.

<sup>2</sup> Compare the preceding note.

stone foundation in the center. A circular hearth (Fig. 99), its rim formed by dark brown soil, was uncovered at a depth of 1.00 below the wall edge. A distinctive feature in the construction of the stone foundations for the *kerpich* walls was the use of mortar in this room.<sup>1</sup>

At an average depth of .50 below the surface of the mound, an extensive paved area (No. 3) was situated south and east of Room 1 and reached into



FIG. 102.—PLOT 37. DEEP EXCAVATION IN ROOM 1; AT BOTTOM, MAN BESIDE BIG STORAGE VESSEL

Plot 36. A round pit (No. 4) 1.00 deep had been dug through this pavement. A *kerpich* wall (No. 5) and remains of stone walls extended from Room 1 toward the northeast, suggesting other rooms. Here fragments of pottery plaques (Field No. 1038) with relief ornamentation were uncovered at a depth of .30.

PLOTS 36-37 (Figs. 102-3).—Here a number of wall remains and rock piles were found which gave little clue as to the ground plans of the structures. In Plot 37 the excavation was carried down 5.00 inside a section (No. 1) bordered

<sup>1</sup> It was subsequently found that this room and the adjacent pavement (No. 3) were the principal Roman remains on Mound A.

on the southeast by a *kerpich* wall (No. 2) and by three stone walls. These last, however, were situated somewhat higher than the *kerpich* wall. Figure 103 shows the similarity between the situation here encountered and that in Plots 35 and 38 illustrated in Figure 95. In Plot 37 also, the fine wares disappeared at a certain depth, to be replaced by Period III sherds. Though the latter were less frequent here than at the other place, the lack of fine wares and glass beads

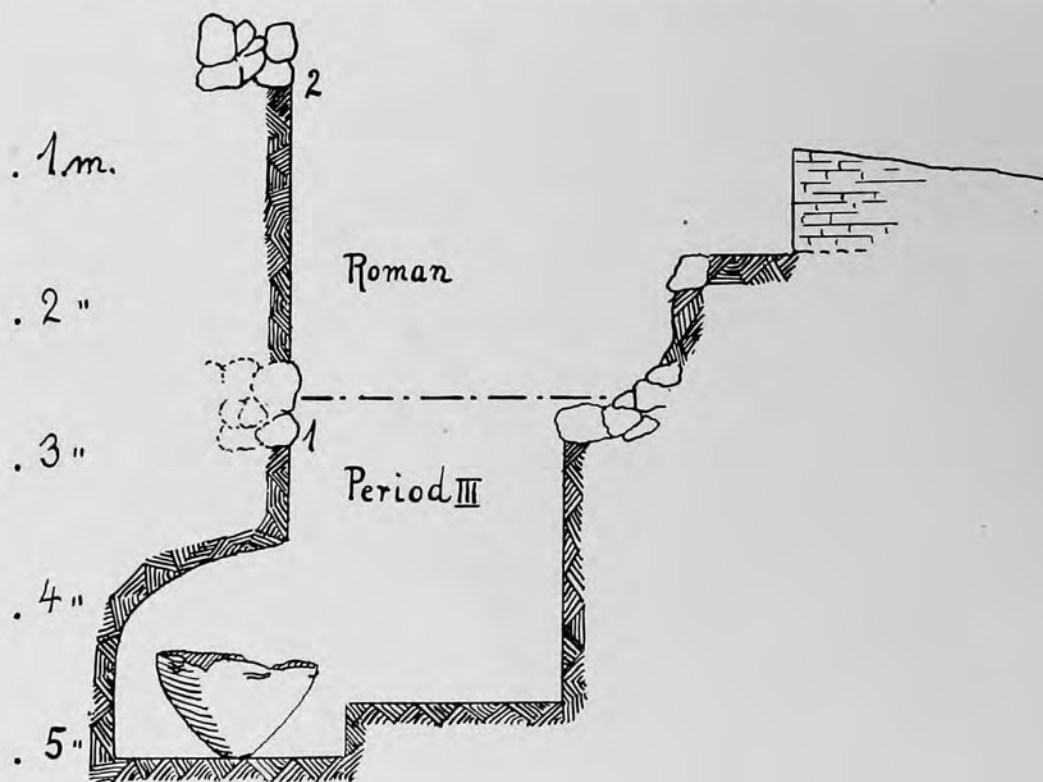


FIG. 103.—PLOT 37. DIAGRAM OF DEEP EXCAVATION IN ROOM 1, WITH ROMAN AND PERIOD III LAYERS INDICATED

in the layer marked "Period III" on the diagram served as a clue. There was some doubt as to whether the line of demarcation between the Roman period and Period III should be drawn above or below the wall marked "1" on Figure 103. This wall was situated 1.70 below Wall 2. Future work will determine accurately how many architectural layers belong to the Roman period.<sup>1</sup> At a depth of 5.00 half of a big storage vessel (Field No. 976) with four horizontal handles was uncovered.

<sup>1</sup> During 1928 it was determined that there was only one Roman layer (cf. p. 109, n. 1).

Plot 41.—In Plot 41, adjoining, there was a narrow passage (No. 1) at a level below that of Pavement 3 in Plot 40. Parts of the paved floor of the passage and of the foundations of its inclosing walls were preserved. A stone doorsocket (No. 2) was built into one of these two walls. South of the passage three fire pots (Nos. 3–5) of the common type (Fig. 104) stood on a level somewhat below its pavement. Each was inclosed by a clay shell, as had been the pots uncovered in Plots 6 and 25.



FIG. 104.—PLOT 41. FIRE POTS (FROM SOUTH)

Plot 43.—Part of a rectangular room was found in Plot 43. It was formed by *kerpich* wall No. 5 of Plot 40 continued, Wall 1, and wall fragment No. 5. Its floor had been paved with stone slabs (No. 2). Wall 6 of Plot 40 may represent the stone foundation of the fourth wall. Wall 3 of Plot 43, accompanied by a pavement (No. 4), was superimposed on Wall 6 of Plot 40, while the wall fragment No. 7 in Plot 40 had in its turn been built on top of Wall 3 of Plot 43. This example illustrates the complexity of the situation in many parts of the structures excavated on the top of the mound.



In the corner formed by Walls 1 and 5 of Plot 43 a fireplace (No. 8) was situated, a simple quadrant of burned soil inclosing ashes. Another superposition of walls occurred in the northeast corner of the plot. Wall 6, which was seemingly contemporaneous with Wall 1, consisted of a top layer of stones resting on a *kerpich* wall superimposed on Wall 7 of Plot 39 (see Fig. 105). The latter represented part of a structure with paved floor (No. 9) which extended into Plots 39 and 46.

PLOT 39.—In Plot 39 the passage (No. 1) described in Plot 41 broke off. Remains of walls which had crumbled over the edge of the mound top filled the rest of this plot.

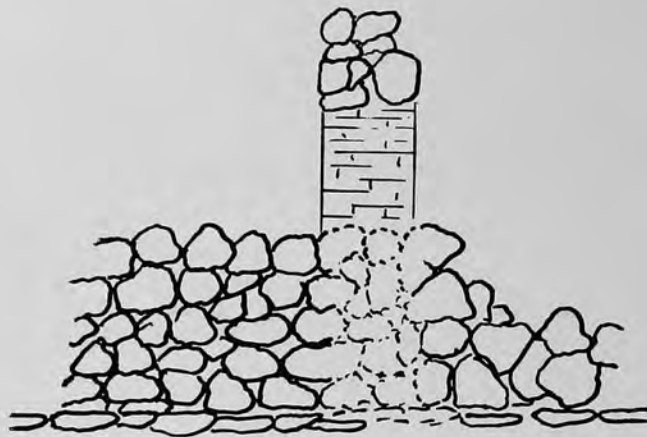


FIG. 105.—PLOT 39. DIAGRAM OF SUPERPOSED WALLS  
NOS. 6 AND 7

PLOT 46.—Wall 7 of Plot 43 abutted on Wall 1 of Plot 46. The pavement, however, was continued toward the north, and reached almost to a strip of *kerpich* (No. 2) suggesting the remains of a wall. A little above the pavement north of Wall 1, a hand mill (No. 3; Field No. 3261) was situated (Figs. 106-7). It was oval and had a rectangular depression in the center of one face connected with each end by a groove. There was a perforation at one end, and the central depression was worn through by use; the hole showed on the grinding surface, which fitted on another stone lying at its side. The second hand mill was unmarked, with the exception of a grinding surface.

PLOTS 45 AND 42.—A mixture of Roman and Period III objects was found in some plots, particularly in those excavated at the edge of the mound top. However, in several plots the majority of the specimens were Roman. In Plots 45 and 42 the excavation was carried through the Roman layer into the Period III

deposit (cf. Fig. 108), as indicated in the lower part of each plot by the unrivalled predominance of painted buff ware sherds. In Plot 46, however, we had not penetrated far enough to strike definite Period III objects. Associated with Pavement 4 in Plot 42, Period III pottery was found. But Wall 1, the accompanying stone slab pavement (No. 2), and another pavement (No. 3) were on a considerably higher level.



FIG. 106.—PLOT 46. HAND MILL (NO. 3)

#### THE CITADEL WALL PLOTS (FIG. 109)

With the exception of Plots 33 and 34, all the following areas were excavated for the definite purpose of uncovering the powerful wall which inclosed, during Period III, a citadel now entirely covered by the Roman, and possibly intermediate, settlements. The architectural details concerning this wall as a whole are given in chapter vii. Pottery associated with the citadel wall, especially that found behind its inner edge, was our main criterion for defining the period of this structure. Only a few Roman fine ware sherds occurred in these plots, and solely in the upper layer of soil, having apparently fallen down from the mound top.

PLOTS 33 AND 34.—Wall 1 of Plot 33 (Fig. 110) was preserved to a height of almost 3 meters. Horizontal depressions visible on its outer face (Fig. 111) suggested that wooden beams had been used to strengthen it. This wall probably formed part of the fortification represented by the citadel wall. It abutted the débris of the latter in Plot 31, where it was accompanied by another, narrower wall forming the southern border of the burned area described in Plot 30



FIG. 107.—PLOT 46. HAND MILL (NO. 3) TURNED SO AS TO SHOW GRINDING SURFACE

and abutting the citadel wall. This narrow wall ended at a pit (No. 2) which was partly bordered by stones and contained some broken pottery without particular earmarks (Fig. 112). However, in the deep excavation south of Wall 1, only Period III pottery occurred. In the northeast corner of the plot, Wall 3 was superimposed on Wall 4, which in its turn extended on top of the remains of Wall 5. Wall 3 was part of Room 1 of Plot 38. Wall 4 probably belonged to the level of Wall 4 of Plot 35; and Wall 5 was level with the lower layers of Wall 1 of Plot 33. The last-named wall turned southward in Plot 34, and is probably continued below and beyond the curved wall fragment No. 1 of Plot 34.

## THE EXCAVATED AREAS

Plot 47.—The inner edge of the citadel wall was here followed, and a section of a room (No. 1) was uncovered which corresponded in its level with the burned floor No. 1 of Plot 30. Wall 2 ran parallel to the main wall, while Wall 3 was continued for a short distance on the very top of the citadel wall. However, both Wall 3 and Wall 4 seem to be later additions.

In the part of Room 1 uncovered to date, two fire pots (Nos. 5 and 6) of the usual type were found. There was a pile of broken pots north of Wall 3, at the



FIG. 108.—PLOT 42. MAN STANDING ON PERIOD III FLOOR OF DEEP EXCAVATION

spot marked No. 7. Two painted Period III vessels (Field Nos. 3237 and 3239) were recovered here, also a large jar (Field No. 3238), which had been repaired with lead wire, and a plain pitcher (Field No. 3240). These vessels, with the exception of the last mentioned, were not affected by any violent fire. But somewhat to the south of these pots, and right beside the base of Wall 3, dozens of fire-blackened, small stones were piled together. They had various shapes: circular, oval, triangular, etc.; and nearly all of them were polished or at least smooth from use.



## THE ALISHAR HÜYÜK

PLOTS 48, 50,<sup>1</sup> 51, AND 52.—In Plot 48 the outer edge of the citadel wall was traced, and it was found to extend straight through this plot. In Plots 50 and 51, however, there was a jog, and this section was replaced by another on a lower level. To date, no difference has been found between the sherds and

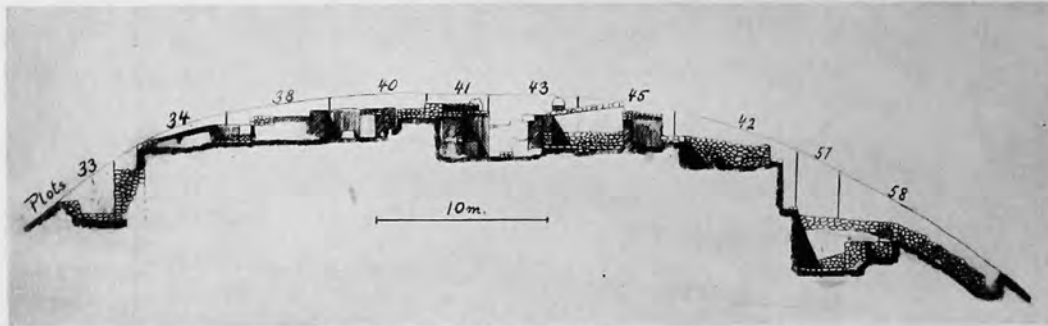


FIG. 109.—SECTION THROUGH TOP OF MOUND A



FIG. 110.—PLOT 33. START OF WORK (FROM NORTH)

other objects associated with the somewhat higher level of Plots 30, 47, etc., and those of Plot 52, etc., where the wall is lower.

PLOT 53.—Here a number of structural remains were uncovered which extended terrace-like from the high level of Wall 2 of Plot 46 to the level of the

<sup>1</sup> There is no Plot 49. The area west of Plot 17 received that number but was afterward left unexcavated.

citadel wall, about 5 meters below. In an inclosure (No. 1), a little below the highest level, two skeletons ( $X_1$  and  $X_2$ ) were uncovered which are probably somewhat older than the Roman period. At approximately the same level there was a small rectangular niche (No. 6) made of plaster and containing some ashes. It suggested a fireplace.



FIG. 111.—PLOTS 33-34. HIGH WALL (NO. 1 IN PLOT 33)

Remains of the lowest level were found behind Wall 2, which stood somewhat apart from the inner edge of the citadel wall. Walls 3 and 4 were superimposed on Wall 2. The most instructive specimens found inside the room-section represented by Wall 2 were once more pottery vessels. At spot No. 5 three painted Period III pots (Field Nos. 3241, 3243, and 3244) were uncovered. A ring-shaped stand (Field No. 3242) was associated with the pot first mentioned. All these vessels were blackened by fire. So were the specimens recovered in a small room (No. 7) inclosed by Wall 2 and three *kerpich* walls, of which only the inner edges were well defined.

PLOT 56.—The structural remains in this plot, as in Plot 53, showed a ter-

raced arrangement. In an inclosure (No. 1) connected seemingly with the lowest structure of Plot 53 (No. 7 of that plot) some Period III potsherds were found. On the south wall of this room a room-section (No. 2) was superimposed, bearing on its top Wall 3, beside which a small jar (Field No. 3245) was found at a depth of .30 below the surface. This jar has a horizontal handle across the orifice, with a central protuberance on top reminding one of a couchant animal.

PLOTS 55, 54, AND 57.—The typical sherds accompanying the wall here as elsewhere were painted buff ware of Period III. In Plot 57 a small, fire-black-



FIG. 112.—PLOT 33. PIT 2 WITH BROKEN POTTERY

ened Period III pitcher was found at a depth of 3.80 behind the inner edge of the wall.

PLOTS 58-60.—Important finds were made in Plots 58 and 60. In each of these plots a bulla was uncovered bearing an incised inscription in "Hittite" hieroglyphs. The bulla (Field No. 3099) from Plot 58 was found among the rocks on the present top of the citadel wall, at a depth of 1.70 below the surface. The bulla (Field No. 3100) from Plot 60 lay behind the inner edge of the wall, 1.10 below this edge and 3.30-3.60 below the mound surface, and was definitely associated with Period III painted buff sherds. At the same depth a scaraboid (Field No. 3101) was found; another (Field No. 3102) was in the dump soil taken from a depth of 3-4 meters. The citadel wall was traced as far as Plot 60 during the first working-season.

## THE EXCAVATED AREAS

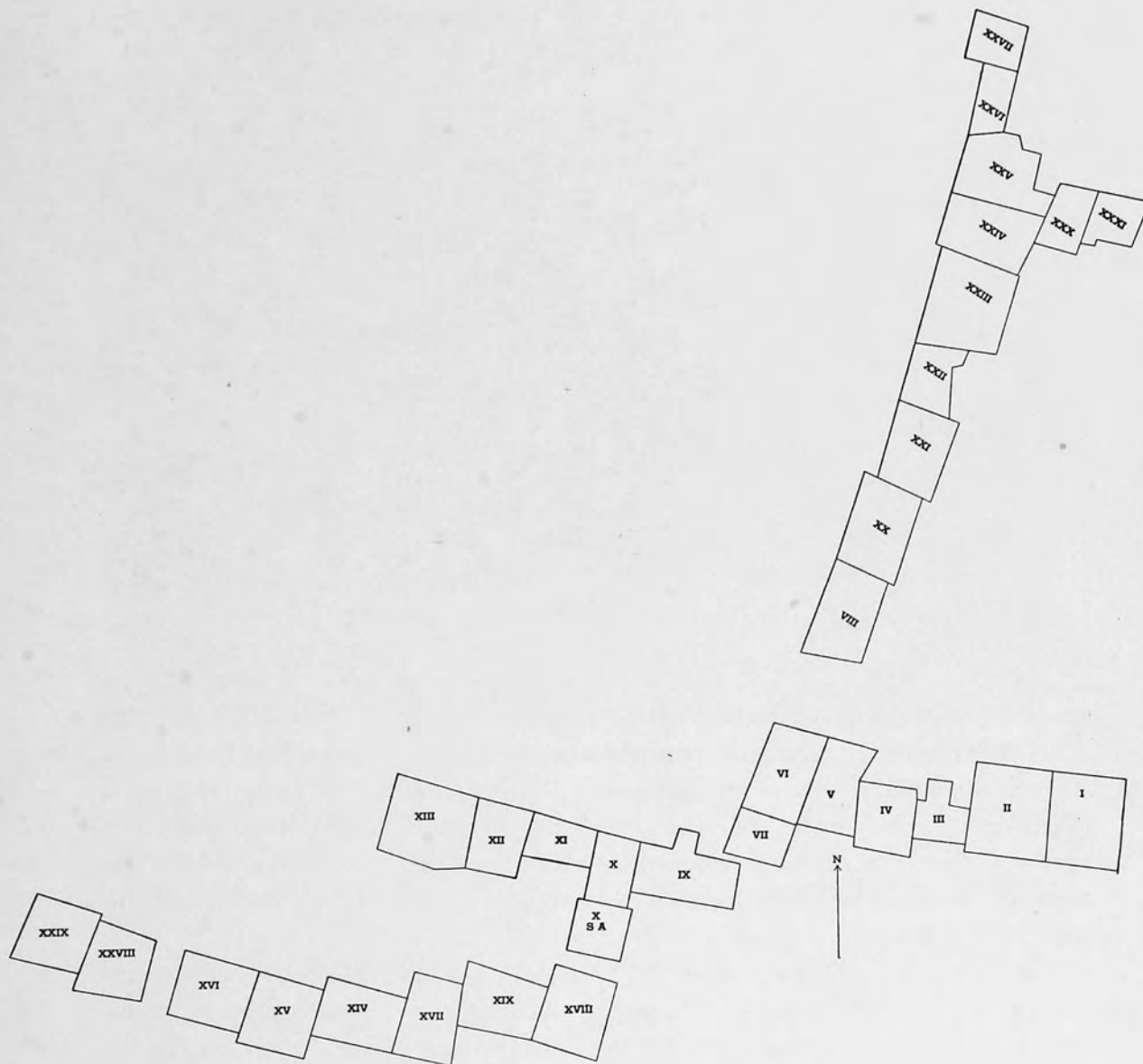
119

## THE TERRACE (MAP 13)

## THE MIDDLE TRENCH (MAPS 14-17)

PLOT I (MAP 14).—This was the first plot excavated in the terrace of the *hüyük* at the foot of its eastern slope. No architecture whatsoever was struck,

MAP 13



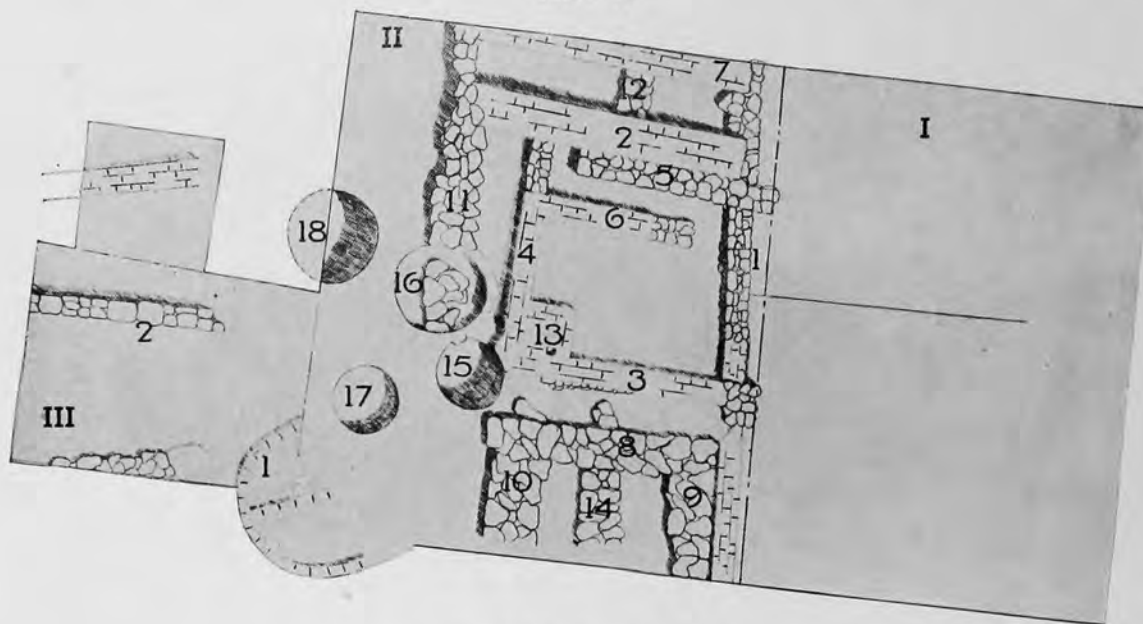
THE TERRACE PLOTS. SCALE, 1:1,000



and hardly any sherds or other specimens were found. The soil consisted of pure grayish black clay and other layers of sedimentary deposits such as are accumulated in quiet water. It is not impossible that at some period a moat encircled a settlement on the *hüyük*; or a lake may have extended to this spot.<sup>1</sup>

PLOT II (MAP 14).—In this plot the situation was quite different. Many walls appeared (Fig. 113) and numbers of specimens. But how great was the contrast between the latter and those we had found on top of Mound A and

MAP 14



PLOTS I-III. SCALE, 1:200

during the entire previous excavation! No "fine wares" turned up, only a few painted sherds, no glass, no iron, little bronze. Instead, pots and numbers of sherds appeared of types we had not yet encountered, also bone pins, crude little effigies, and small "cakes" modeled in clay. We had found the first structures and objects of our Period II, much more remote than the last occupation of Mound A and apparently preceding the period of painted pottery, our Period III.

Here was a room, inclosed by Walls 1, 3, 4, and 6, boxed into a larger division consisting of Walls 1, 2, 11, and 8. Narrow passages separated the parallel walls, interrupted, however, by the continuation of Wall 4, which abutted

<sup>1</sup> *OIC*, No. 2, pp. 33-34.

Wall 2 of the outer room. Another narrow passage occurred between Walls 2 and 7; and at the south end of the plot was uncovered part of a room inclosed by Walls 8, 9, and 10.

As to the type of construction, Wall 1 was built of big bowlders up to .90 in length and .50 in height, together with wall stones of the ordinary size. In the northern part it was 2.20 high, 1.40 in the center, and 1.20 in the southern part. As an outer inclosure, first exposed to an attack, it must be considered



FIG. 113.—PLOTS I AND II. WORK IN PLOT II; STERILE PLOT I IN FOREGROUND

weak. Its breadth was only .90 in the northern part and .60 elsewhere. A layer of *kerpich* may once have covered it entirely; but only in the center and toward the south were brick remains found on its top. Both the center and the southern part were built of stones, partly flat, smaller than those in the northern part. The wall looked as though it had been built not at one time but rather in two or three divisions.

Walls 3, 4, and 6 were made of *kerpich*, in part still .90 high and averaging .50 broad. They rested on a stone foundation .30 high. Part of Wall 3 was covered by a whitewash .01 thick, the lower edge of which was .30 above the

stone foundation. Nor did the whitewash extend to the actual corner of the room, but only to a rectangular block (No. 13) of *kerpich*-like appearance filling this corner. There it turned and extended along the eastern side of the block. On top of the latter a rectangular depression  $.20 \times .30$  was found,  $.25$  deep. Walls 2 and 7 were of the same type as Walls 3, 4, and 6. Wall 2, however, was  $.90$  broad.

Walls 8, 9, and 10 were built of rather big, irregular rocks. Wall 8 was  $.90$  high and broad. Its lower edge was  $.80$  above the upper edge of Wall 14. Here it must be mentioned that only the latter wall and Wall 12—both built according to the type of Walls 8, 9, and 10—stood as deep as the lower layers of the outside wall (No. 1). It seemed that all the remaining walls uncovered to date were built later. However, the objects found in the rooms and passages gave no hint of a dual occupation.

In the western part of the plot four refuse pits were uncovered, characterized by well-defined circular areas filled with loose grayish black soil—ashes and charcoal particles—contrasting with the surrounding soil of lighter color and greater hardness. These pits, as well as those subsequently uncovered, contained many sherds and furnished good samples of contemporaneous types. Such pits often had a relatively narrow orifice and an expanding bottom. The upper edges of these four pits were on the same level, averaging 1 meter in depth from the surface. Their dimensions were as follows:

Pit No.	Diameter at Top	Diameter at Bottom	Depth
15.....	1.50	1.65	.70
16.....	1.75	1.75	.70
17.....	1.65	1.80	1.00
18.....	2.00	2.25	1.50

Pit 16 had been dug right on top of Wall 11, indicating that it was more recent than the latter.

As to the type of *kerpich* bricks used in the structures in this plot, those at the south end of Wall 1 were especially well marked. They had a yellowish brown color with distinct margins of grayish soil  $.01$  broad inclosing the original bricks. The length of the latter was  $.37$ , their height  $.06$ – $.07$ , and their breadth approximately  $.14$ – $.16$ .

Depth of excavation was: northwest corner, 2.60; central room, 2.10; north passage, 3.20 at west and 2.00 at east end; front of Wall 1, 3.20.

PLOT III (MAP 14).—Although the excavation in this plot was carried to a depth of 2.60 (west) and 1.50 (east), no structures were found except an oven—probably a kiln (No. 1)—and a badly built wall (No. 2), both directly below the surface.

The kiln (Fig. 114) seems to have had a semi-oval ground plan with walls .20-.25 thick made of fire bricks yellow and hard. Whether the latter were originally fired or became thus by use is doubtful. A row 2.00 long of such



FIG. 114.—PLOT III. KILN

bricks divided the oven into halves. At the center of the base of the oval, toward the east, there was an opening flanked by two rectangles of bricks, each .65 broad. The opening was .70 wide, the entire length of the base was 3.40; while the length of the oven, measured east to west, was 3.65 when found. The height of the walls was .30-.35.

Wall 2 was .30-.35 high and .50 broad with irregular edges. It was composed of stones of ordinary size.

Nearly the entire plot was excavated in a bed of dark gray ashes and charcoal. Only a few lighter-colored strata were visible at the plot walls. The soil



was identical with that found in the refuse pits of other plots. It looked as though we had struck a one-time depression in the surface which had been filled with rejected material. Tempted by the appearance of this refuse, we started to section an adjacent block of soil (Fig. 115) in order to determine possible superpositions of culture layers. However, we struck a *kerpich* wall which prevented accurate sectioning.



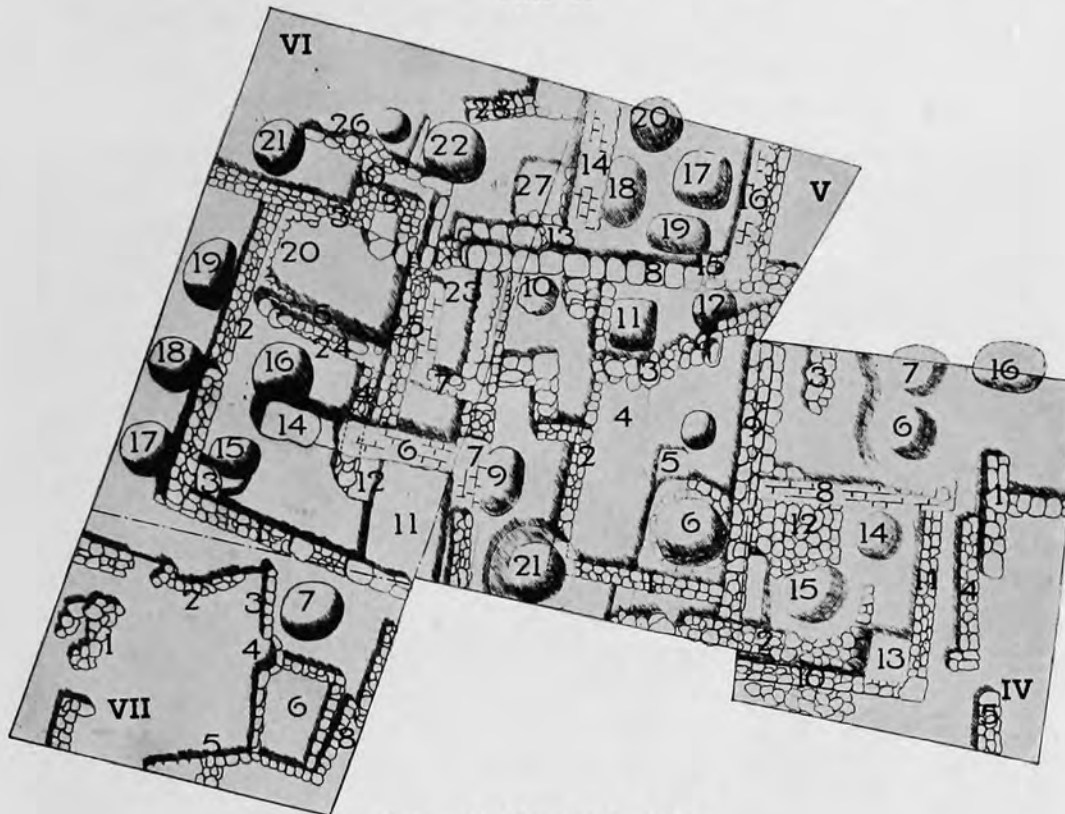
FIG. 115.—PLOT III. VIEW FROM SOUTHEAST; WORK IN STRATIGRAPHIC ANNEX

PLOT IV (MAP 15).—Contemporaneous with Wall 2 of Plot III were Walls 1 (which the former abutted) and 2 of this plot. Both were one or two layers deep and of the type of the wall first mentioned. The remaining structures were built on slightly differing levels. The wall fragments Nos. 3, 4, and 5 and the pits Nos. 6 and 7 may possibly be somewhat more recent than the structures yet to be mentioned. But they are without doubt older than Walls 1 and 2.

The most ancient structure was a room inclosed by Walls 8–11. Its north-west corner was covered by a stone slab pavement (No. 12). In its southeast corner was found a hearth (No. 13) made of a plaster-like material smooth on the surface and blackened by use, while Pits 14 and 15 had been dug below the

floor. Pit 15 extended partly beneath Pavement 12. The average depth, measured from the lower edge of the four walls to the surface, was 1.50; the average height of the walls was .50. Only on Wall 8 a *kerpich* layer, .35 thick, occurred.

MAP 15



PLOTS IV-VII. SCALE, 1:200

As to the rest, the walls were made of irregularly set stones, those of Wall 9 being larger than the others.

Measurements of the pits (cf. Fig. 116) were as follows:

Pit No.	Diameter at Top	Diameter at Bottom	Depth
6.....	1.30	1.70	1.40
7.....	1.40	1.40	.40
14.....	1.30	1.30	1.00
15.....	1.30	1.30	1.10
16.....	1.50	1.80	1.25

The orifices of Pits 6 and 7 were .70 above that of Pit 16.

PLOT V (MAP 15).—Adjoining the room described in Plot IV, another inclosure was here uncovered. Wall 9 of Plot IV was common to both. The other walls were Nos. 1, 2, and the remains of 3. They were badly built, and only one or two layers were preserved. Wall 2 was only .35 broad in places. The southern edge of the plot was .80 above the foot of Wall 1, while the distance from the surface to the remains of Wall 3 was 1.70. The difference in depth was due mainly to irregularities of the *hüyük* surface.



FIG. 116.—PLOT IV. REFUSE PITS AT NORTH WALL OF PLOT

A roughly rectangular "cemented" spot (No. 4) was situated in the northwest corner of the room. It was of the same type as Plot IV, No. 13. It too was smooth and blackened by fire, .30 thick and consisting principally of small, hard white lumps alternating with horizontal layers of black ashes. It was a hearth built up of successive layers. A similar spot (No. 5) was found near the southeast corner. Both were on a level with the present upper edges of Walls 2 and 3. Those of Walls 1 and 9 of Plot IV were about .50 higher up.

The edge of Pit 6 was .70 above the fireplace. This pit belonged to a later occupation. Its depth was .55. On the same level as Pit 6 was Pit 21, situated

over the southwest corner of the room. It was 1.10 deep, its mouth being .45 below the surface. Possibly related in time to these two pits was the wall fragment No. 2 of Plot IV which continued into the present plot.

Walls 7 and 8, built better than Walls 1-3, ran parallel to Walls 2 and 3, leaving narrow passages between. The continuation of Wall 2, however, abutted Wall 8. The situation resembled somewhat that of Plot II as to boxed-in rooms, but the structures in the present plot were less distinct and not as well preserved as those of Plot II. The lower edges of Walls 7 and 8 were on the same level as those of the parallel walls; but Wall 9 of Plot IV was two layers high and composed of somewhat bigger rocks, while the remains of Wall 8 were even as high as seven layers at the east end. Three layers of *kerpich* bricks were found on top of the southern section of Wall 7; on their top in turn stood a one-layer wall of stone.

Two pits (Nos. 9 and 10) were uncovered in the passage west of Wall 2. Their orifices, however, were .60-.70 below the foot of this wall. Wall 7 extended right on top of the western half of Pit 9. The depth of the latter was .90, that of Pit 10 approximately .50. Two more refuse holes (Nos. 11 and 12) were between Walls 3 and 8. Both were .60 deep.

North of Wall 8 a wall fragment (No. 13) accompanied it for a short distance. Its foot, however, was about .20 higher than that of Wall 8. It did not quite abut Wall 14, which ran parallel to Wall 16. The latter abutted Wall 15, which in turn adjoined Wall 8 at its east end. The bases of Walls 15 and 16 were on the same level but considerably above that of Wall 8 and also somewhat above those of Walls 13 and 14. Their orientation, however, suggests that they with Wall 14 formed one room, built later than the structure to which Wall 8 belonged.

Both Walls 14 and 16 were made of *kerpich* on stone foundations. Wall 14, when found, was .55 high, its foundation measuring .30. The breadth of this wall was .60, while that of Wall 16 was 1.00. The height of the stone foundation of the latter was .55; that of the *kerpich* remains, .20. Four pits (Nos. 17-20), all of them at a level .30 below the foot of Wall 16 but directly below that of Wall 14, were uncovered within this area. Their depths were: No. 17, 1.00; No. 18, 1.40; No. 19, .55; No. 20, .55. The diameters of the bottoms of Pits 17 and 18 were somewhat greater than those of their orifices.

In the southern section the excavations were carried to a depth of 1.40 except for the west passage, where an average depth of 1.80 was attained, and



for the pits, which ran still deeper. In the northern section (Fig. 117) the depth reached was 2.45 plus the depth of the pits, though in the northeast corner only 1.10 of depth was excavated.

Plot VI (MAP 15).—Two distinct periods were indicated by the superposition of two structures in this plot. The older complex was seemingly contemporaneous with Walls 7 and 8, etc., of Plot V, but oriented differently. Walls 1, 2, and 3 formed a big inclosure, which had been subdivided into sev-



FIG. 117.—PLOT V. BROKEN POTTERY AT NORTH WALL

eral small rooms. Some of their walls are still hidden beneath a later structure, which has not yet been removed. The visible walls were Nos. 4-7. To this complex belonged also Walls 9, 10, and 28 outside the big inclosure.

Only on top of Wall 6 was a *kerpich* layer found. The remaining walls were built of stone in the same manner as those of the corresponding rooms in Plots V and IV. In part, they had a breadth of only one stone, as big as two of ordinary size. Only one or two layers of the walls were left. None of them was well built. The distance from the surface to the foot of the walls was 1.30 at the

southeast corner, 1.40 at the southwest corner, and 1.70 in the northwestern part.

In the southern section of the inclosure again several patches of plaster were found. Their levels varied somewhat. That of patch No. 11 corresponded to the upper edge of Wall 1; patch No. 12 was .20 below No. 11; while patch No. 13 touched the foot of Walls 1 and 2 in the southeast corner of the room. Patch No. 12 was continued below patch No. 11. The type of No. 12 was identical with that of the hearths described above, while No. 11 had more the appearance of a floor, stones having been used as a foundation. Its surface, though smooth, was not blackened by fire as were patches Nos. 12 and 13. The last had the form of a tub .15 deep, its walls sloping toward the edge. Patch No. 14 was situated .80 above the level of patch No. 13, but its continuation could hardly have been higher than patch No. 11.

Four pits (Nos. 15-18) were situated two on each side of Wall 2. All were on the same level, reaching up to the floor inside the inclosure. Pit 17 extended below the foot of Wall 2. The depths of these refuse holes were: No. 15, .90; No. 16, .80; No. 17, .80; No. 18, 1.30. Five more refuse pits were found in various parts of the plot. Pits 19 and 23 were rather indistinct. It is doubtful whether they were really excavated holes. The remains suggested that Pit 20 had been inclosed by some stones. The level of these pits was approximately the same. All of them had been dug below a level corresponding with that of the floor of the big inclosure. Their depths were: No. 19, 1.00; No. 20, .90; No. 21, .95 (bottom slightly expanding); No. 22, 1.40; No. 23, 1.10.

Superimposed upon the northern part of the big inclosure, a more recent room was uncovered, bounded by Walls 24, 25, and 26. The western wall had entirely crumbled off. When found, this room was represented by one big stone pile, owing to partial collapse of the walls. The latter were composed in each case of one row of head-sized stones with flat edges or of big flat slabs set upright. There were slabs as large as  $.65 \times .40 \times .25$ . The last measurement indicates also the average breadth of these walls. In only a few instances were the walls .30 or .40 broad. But, in spite of its fragile character, Wall 24 was still .60 high, three layers having been preserved. It had been built on top of Wall 5, but was separated from its upper edge by a layer of soil .20 thick which contained also some *kerpich* bricks. The same type of structure was found in several other plots, but in each case the buildings were situated directly below the surface.

Level with the lower layers of this recent structure, plaster patch No. 27

was found. It was inclosed on the east and south by wall fragments .45 high, probably the corner of a room which had disappeared. Its distance from the edge of the plot was 1.10. Its surface was smooth but not charred. It was composed of a white, grainy material (lime?) cemented together. In addition to the surface layer, three more floors were indicated by somewhat darker stripes, in



FIG. 118.—PLOT VII. FIREPLACE IN TURKISH ROOM

which rows of crushed pots and sherds were visible. The height of the plastered area was .30. Its top was elevated toward those edges bordered by the above-mentioned wall corner.

PLOT VII (MAP 15).—The room uncovered in this plot was inclosed by walls built after the same pattern as the superimposed room of Plot VI. Walls 1 and 2 had almost entirely crumbled off. Wall 5 was visible for only a short distance, while Wall 3 and a fireplace (No. 4) were well preserved. Wall 3 and the walls

of a small stable-like inclosure (No. 6) and Wall 8 were built of one row of stones, some rather large flat slabs having been set upright here as in Plot VI. As to the period of construction, Turkish tobacco pipes of clay were found within the refuse filling of this room, suggesting that it was of Turkish origin. The rooms of Plots VI and VIII which were built after the same fashion probably belong to the same period.

The fireplace (Figs. 118-19), identified as such by its form, the ashes at the bottom, and the blackened rocks bordering it, had a curved rear wall of slabs and stones built up behind an opening in the room wall. The floor of this fireplace was covered in mosaic fashion with pottery slabs. On the side toward the

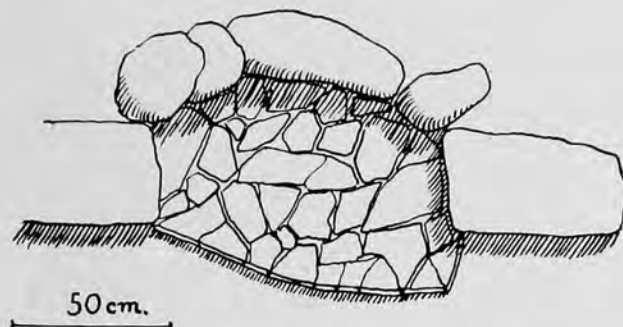


FIG. 119.—PLOT VII. PLAN OF FIREPLACE

room, slabs with turned-up rim were used to form a raised edge. At the northern corner of the fireplace the wall was still .90 high, consisting of selected rectangular rocks. The back wall and the southern corner were .45 high. A shallow refuse pit (No. 7) was situated north of inclosure No. 6.

The excavation of this plot was carried to a depth of 1.00.

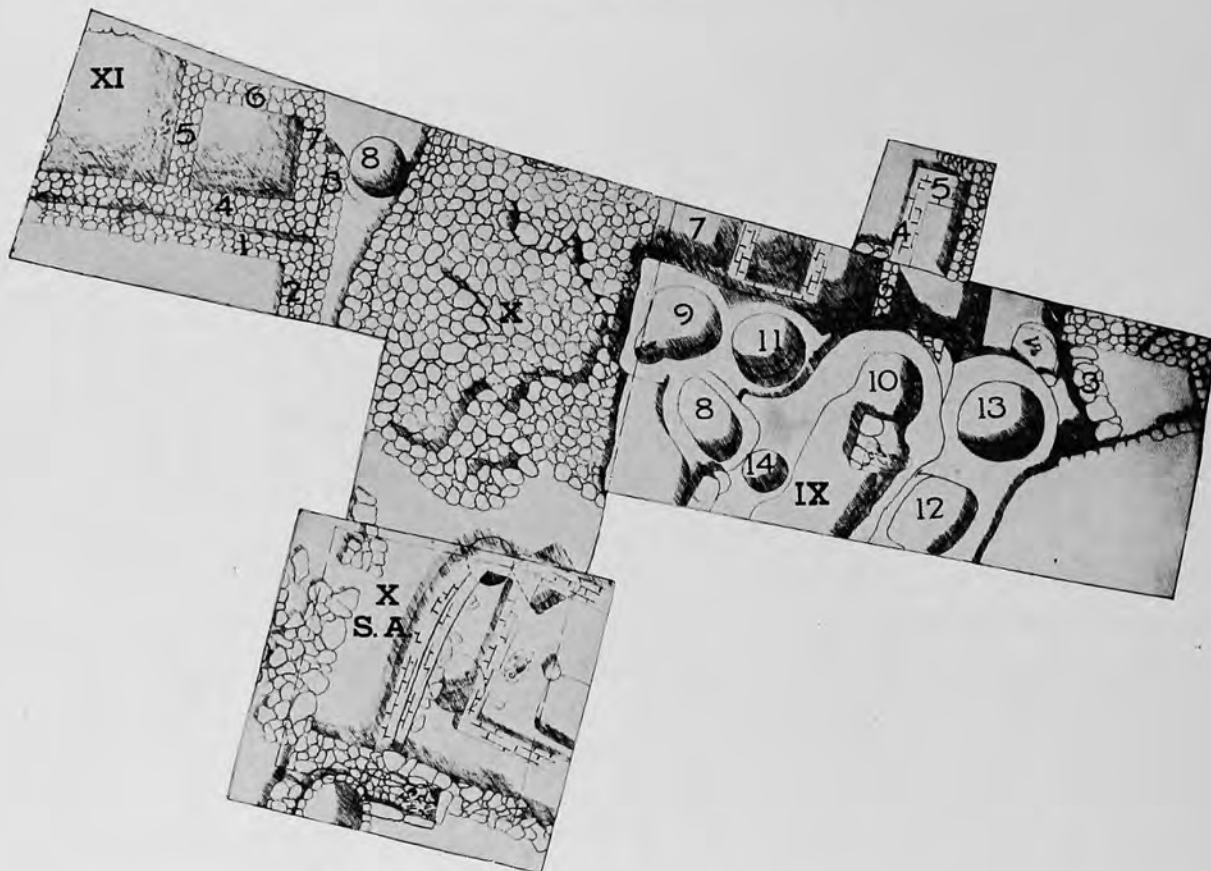
PLOT IX (MAP 16).—Few walls were found in this plot, but seven pits were uncovered. When two big rocks were removed which were lying on the surface and reached .20 below it, one of them proved to be a cupstone (Fig. 120). It measured  $1.00 \times .70 \times .70$ , and had sixteen circular depressions on one side. Fourteen of them were arranged near one edge in two rather regular parallel rows. The diameter of these depressions varied from .08 to .03. Their depth varied from .04 to .01. An identical cupstone lies on the surface at the deserted Armenian village of Manzor Oghlu situated across the creek west of the *hüyük*.

Wall 1 was on the same level as the room in Plot VII. The base of its single layer of stones was only .35 below the surface. Though Wall 2 was somewhat



deeper, .70 from the surface, it may have belonged to the same level as Wall 1. Each was built of two rows of stones. Wall 2 reached into an annex where a stratigraphic study had been attempted but had been stopped by the appearance of two *kerpich* walls (Nos. 4 and 5). Their footing was 2.20 below the sur-

MAP 16



PLOTS IX-XI. SCALE, 1:200

face, and they were .40 high. The *kerpich* bricks were of the usual light yellowish brown color. Thirty centimeters below the foot of Wall 4, a piece of stone wall (No. 6) ran almost in continuation of the *kerpich* wall toward the south. But the base of the latter was above the upper edge of Wall 6. Wall 3 was found 1.90 below the surface, i.e., considerably below Wall 1, under the west end of which it extended.

## THE EXCAVATED AREAS

The measurements of the various refuse pits were as follows:

Pit No.	Depth below Surface	Depth of Pit	Diameter at Top	Diameter at Bottom
8.....	1.00	.80	1.00-1.50	1.00-1.50
9.....	1.10	.80	2.30	2.00
10.....	1.30	2.00	1.60	1.30
11.....	1.50	.90	1.70	1.20
12.....	1.50	1.30	1.80	1.40
13.....	1.50	2.20	1.90	.90
14.....	1.30	1.10	1.00	.80

Pits 8, 9, and 11 had a rather irregular shape. None of these refuse holes had an expanding bottom such as was noticed in other cases.

The lowest structure found in this plot was a small *kerpich* inclosure much resembling the burial cist in Plot XII. It was 3.50 from the surface. The height of its walls was .50. Depths of excavation were as follows:

Northeast corner.....	2.30
North central part.....	3.70 and 6.00
Stratigraphic annex.....	2.00
Southeast corner.....	2.40
Southwest corner.....	2.20
Northwest corner.....	6.00

The original surface was struck in the north central part at a depth of 5.10 and in the northwest corner at a depth of 5.50. The line of demarcation was sharp. The grayish black *hüyük* soil was replaced by whitish or yellowish white soil; and no more ashes, charcoal particles, sherds, or other objects appeared.

PLOT X (MAP 16).—With the exception of two superimposed layers of stone pavement, no architecture was here uncovered. There was a big trefoil-shaped opening in the center of the upper pavement, the level of which averaged 3.30 below the surface and .60-.70 above the lower pavement. The stones and slabs of which the upper pavement was composed were rather irregular, but here and there series of flat slabs indicated the character of the stone-covered area. The excavation was not carried below the well-set flat surface of the lower pavement.

Plot X Stratigraphic Annex is described in chapter viii.

PLOT XI (MAP 16).—The architecture found in this plot (Fig. 121) belonged approximately to the levels of the two paved areas of the preceding plot. Some of the walls reached somewhat higher up; others extended somewhat below.

There was a slight difference in the level of Walls 1-2 as compared with those of Walls 4-7. Wall 5 stood .50 below Wall 1 (see Fig. 122). All the walls were built of a double row, interchanging here and there with a single row, of irregular stones. In most cases only one layer was left. Wall 4, however, was .90 high, i.e., .50 deeper than Walls 5 and 7 which abutted its present uppermost layer (see Fig. 122).



FIG. 120.—PLOT IX. CUPSTONE BEFORE REMOVAL

The upper layer of Wall 3 was on the same level as Walls 1-2, but it also extended .90 deeper. Its total height was 1.20. From the foot of Wall 3 Pit 8 extended to a depth of 1.50. Its bottom was narrower than its top, the former measuring .90 in diameter, the latter 1.20.

The distance between the foot of Wall 6 and the surface was 3.30. There may have been a slight difference in the time of building some of these walls, although their uniform orientation speaks against it. In the levels occupied by these walls no change of pottery or other objects was noticed. A skeleton was found at a depth of 2.40.

## THE EXCAVATED AREAS

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FIG. 121.—PLOT XI. REMAINS OF BUILDINGS; PLOT X IN BACKGROUND

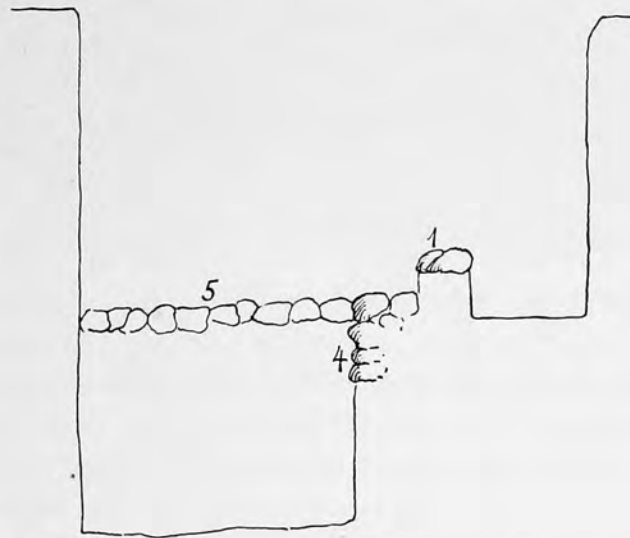


FIG. 122.—PLOT XI. DIAGRAM SHOWING RELATIONS OF WALLS 1, 4, AND 5



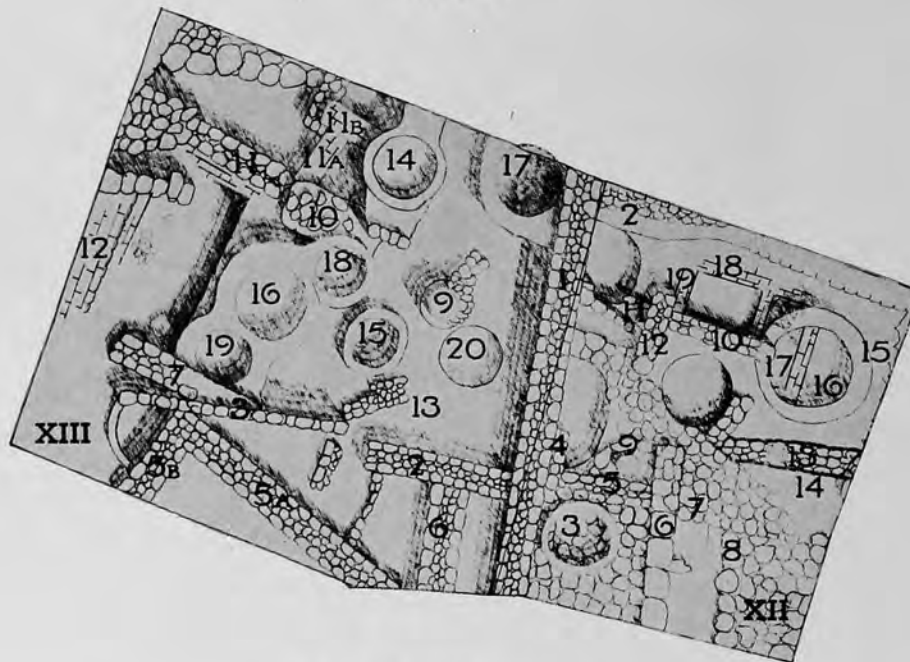
## THE ALISHAR HÜYÜK

The original surface was struck at 4.90 in both places where excavation was carried deep enough. Depths of excavation were:

South central part.....	3.00
Southeast corner.....	3.50
North central part.....	5.30
Northwest corner.....	5.40

As to pottery types, below 2.00 no more fine ware sherds were found. Period III wares ceased at 2.80. Only one Period II sherd occurred below 4.00. Period I pottery extended from about 3.50 to the base of the deposit.

MAP 17



PLOTS XII-XIII. SCALE, 1:200

PLOT XII (MAP 17 AND FIGS. 123-25).—The wall bordering this plot on the west is described under Plot XIII. Including this wall, all together four, or possibly five, levels were here distinguished. The first level was represented by the above-mentioned Wall 1 of Plot XIII, which reached to the very surface; the second level, by Wall 2, which was 1.20 below the surface. Only a part of the latter wall was visible at the north end of the plot. It was .40 high, built of small, irregular stones. Pit 3 probably belonged to the level of this wall, although its present edge was somewhat below the foot of the latter. The pit was

superimposed on a paved room of the third level, which included Walls 4-6 inclosing this room, also Walls 7-9 and probably Walls 10-12.

Walls 4-9 doubtless belonged to one complex. They were built of single rocks interchanging with spots where several smaller stones were laid side by side. There were rocks as big as  $.60 \times .55 \times .40$ . The average height of these



FIG. 123.—PLOT XII PARTLY EXCAVATED (FROM NORTHEAST)

walls was  $.40-.50$ . The pavement already referred to consisted of flat stone slabs forming on the whole a rather smooth surface. The southeast corner of an inclosure formed by Wall 5, the continuation of Wall 6, and Wall 9 was set apart by a curved row of stone slabs  $.10-.35$  high. A crude, fragmentary vessel was found in this quadrant.

Wall fragment No. 12 extended over the top of Wall 10. Both were built of

stones smaller than those of the previously mentioned walls. Wall 11 continued Wall 10. A row of single stones rested on top of the former. Walls 10 and 11, although oriented differently than Walls 4-6, etc., were on the same level as the latter.

The lowest level was represented by stone wall No. 13 and *kerpich* wall No. 14 accompanying it. Wall 13 continued Wall 4 of Plot XI. While Wall 14 ex-



FIG. 124.—PLOT XII. BROKEN POTTERY NEAR WEST WALL (FROM SOUTH)

tended in continuation of Wall 1 of Plot XI, its upper edge was some .30 below the foot of the latter; i.e., a layer of what seemed to be ordinary soil was between it and Wall 1 of Plot XI.

Wall 15, abutting Wall 13, was made of *kerpich* on a stone foundation. The *kerpich* bricks were badly disintegrated, giving the wall a somewhat irregular course. The stone foundation was .35 high; the *kerpich* layer, .50 high in places.

## THE EXCAVATED AREAS

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It is quite possible that some of the walls of Plot XI also had been covered with *kerpich*, which may have been washed off or have crumbled away in the same manner as the *kerpich* layer of Wall 15.

Pit 16 (Fig. 125) was partly cut through this wall. Its orifice was somewhat below the foot of Wall 10; its bottom, .30 below the foot of Wall 15. Its total

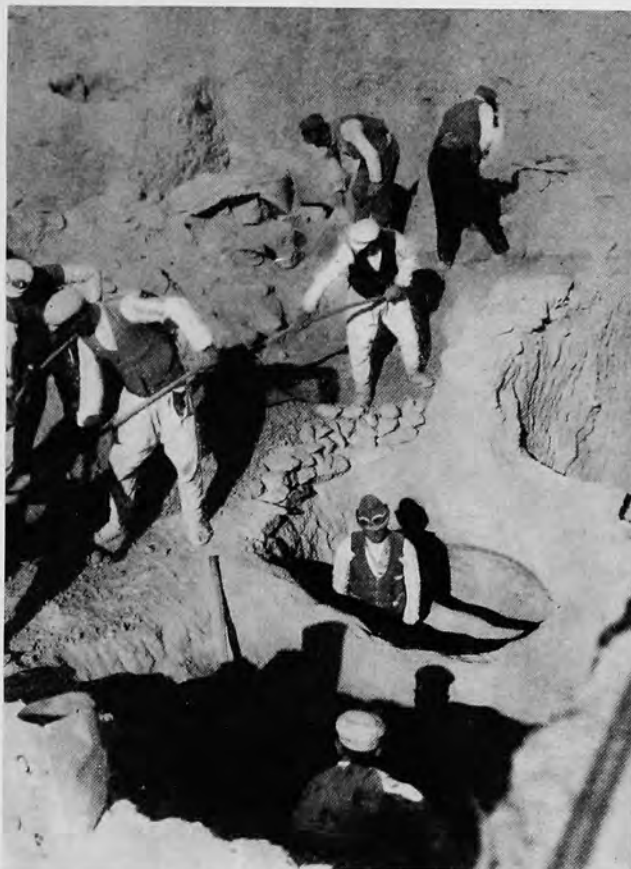


FIG. 125.—PLOT XII. REFUSE PIT (CIRCULAR, WITH MAN STANDING IN IT) SUPERPOSED ON BURIAL CIST

depth was about 1.60 or 1.70. A narrow *kerpich* wall divided it into halves; but this wall belonged to a structure more ancient than the pit itself. The wall was part of a burial cist (No. 17) which belonged to the period of Walls 13, 15, etc. The burial cist, containing the skeletons of an older and a younger woman, leaned against *kerpich* wall No. 18, which, together with Walls 15 and 19, formed part of a structure still mostly hidden below the later remains.

In the burial cist, as well as in the corner formed by Walls 18 and 19, a hard



yellowish floor was struck .40-.50 below the edges of the walls and 4.20 below the mound surface. The foot of Wall 10 was 1.70 above this floor, representing approximately the level of Walls 4-6, etc.

In the northwest corner the excavation was carried deeper than in other parts of the plot. Here some *kerpich* bricks were uncovered at a depth of 5.80,



FIG. 126.—PLOT XIII. TURKISH OVEN

i.e., 1.60 below the floor of the lowest level described above. In this corner the excavation was concluded at a depth of 6.00 without striking the base of the mound. The depths of excavation elsewhere were as follows: west central part, 3.40; stone pavement in southwest corner, 2.60; southeast corner, 3.70.

PLOT XIII (MAP 17).—Wall 1, already referred to in the description of Plot XII, practically formed the boundary between the two plots. Its edge was only .10 below the surface. It was two layers high, composed of relatively big

border-stones with smaller filling-stones. Its breadth was 1.00. Wall 2, abutting it, was of the same type, but had one feature noticed only here and there in Wall 1. The border-stones were not set simply one on top of the other; instead each pair formed an angle. On the same level Wall 3 was found. It was of a type occurring in Plots VI-VIII also, built of relatively small upright slabs. A double row of stones also belonged to this series.

Many remains of recent origin found at their level indicated that all the foregoing structures had been built during the Osmanli period. Glazed sherds and fragmentary pots of the same period occurred, however, at the surprising depth of 3.90, in a layer which elsewhere in the plot contained objects of our

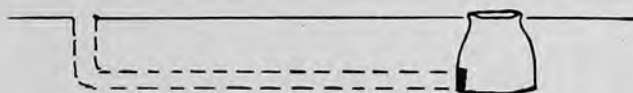


FIG. 127.—PLOT XIII. SCHEMATIC DIAGRAM OF TURKISH OVEN, WITH FLUE INDICATED

Period II. Their presence there was due to a pit (No. 17), which was merely a deep hole dug into the underlying floors and wall remains. Its orifice was 1.00 from the surface. The depth of the pit proper was 2.90. Its bottom was expanded, 1.80 wide, while the diameter of its orifice measured only 1.35.

An interesting structure belonging to the Osmanli period, but built below the level on which the other remains were found, was a baking-oven (No. 9; Figs. 126-27). It was made of crude and brittle earthenware of reddish color, looking like a huge inverted pot. However, there was an opening at the top encircled by a broad, flat rim. There were doors at two sides, south and west, both covered by means of flat slabs of the same material as the oven. Very many such slabs and also bricks were piled up all around it. They had probably been built up in some way to retain the heat. Some were found leaning flat against the outer surface. The base was considerably broader than the top (cf. Fig. 127). The oven stood on ordinary soil and was filled with fine ashes and some charcoal particles. Potsherds taken from its interior gave the first clue as to its origin. There were many glazed Turkish fragments, which at first were suspected of having penetrated into the oven during the period succeeding its construction. This theory was justified by the position of the oven in a layer below the Turkish remains and by the opening at its top.

However, our Turkish laborers, when asked, stated that ovens like this existed in their villages and that this type had been introduced by the Arme-

nians. The Turkish baking-ovens, they said, were made of stones. Their story explained the position below the Turkish layer. The oven (*tandür*) is sunk into a pit (*kuyu*) with its orifice on a level with the floor of the room. The lateral opening is connected with a subterranean flue 5-6 meters long which finally leads up to the surface. Our informant had no explanation for the second lateral opening. The door slab is used for regulating the admission of air. The dried manure of animals is used as fuel. Many disks of this material are seen in the



FIG. 128.—PLOT XIII. WELL-BUILT ROMAN WALL (AT RIGHT) AND TURKISH ONE-STONE WALL (CENTER)

present Turkish villages or sticking to the walls of the houses. Some stones lying on the orifice support a metal disk (*sach*) on which the Anatolian "paper bread" (*yufka*) is baked. The oven is also used to warm the occupants of the room on cold days, all of them putting their feet over the edge, as was explained in a realistic way by our men.

The layer of structures underlying those described above was represented by exceedingly well-built walls (Fig. 128). For their construction mortar was used. The two walls Nos. 5 *a* and *b* were 1.25 high and .75 broad. The border-stones had been carefully selected, resulting in very straight sides. The depth from

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the foot of these walls to the surface was 1.95. A one-layer wall (No. 6) stood intermediate between the first and second levels. It abutted Wall 2 just below the base of the latter. According to its orientation it may well have belonged to the upper series. Wall 7 seems to have belonged to the second level, although it did not extend as deep as Wall 5. It was two layers high.

As to the remaining structures uncovered in this plot, the foot of Wall 10 was 2.30 below the surface. It was .65 high in parts. It was doubtful whether it belonged to the level of Wall 5 or was intermediate between the latter and the structures of the lowest level. These included the stone wall No. 11, possibly the somewhat doubtful *kerpich* walls Nos. 11 *a* and *b*, and finally Wall 12, built of *kerpich* on a stone foundation. Walls 11 and 12 belonged to a room only partly defined on the map. The inner edge of each was accompanied by a ledge of *kerpich* at an average of .20 below the bottoms of the walls. The latter, however, seemed to rest on a layer of *kerpich* extending as deep as the upper edge of the ledges. It is possible that these offsets were originally level with the foot of the stone foundation of Wall 12 and the foot of Wall 11, the upper layers of the *kerpich* having disintegrated. Wall 12 was .85 high in parts, its stone foundation .35-40. Wall 11 measured .70-.80 in height. The sides of both walls were straight. Larger stones had been used for the bottom layers. Wall 11 was of the "border-stones and filling" type. The bottom of Wall 12 was 3.40 below the surface.

There was one more place where the situation was complicated. At spot No. 13, numbers of Roman sherds and fragmentary pots were found at a depth of 2.50-3.00, i.e., in a layer where near Walls 11 and 12 ceramics of our Period II in addition to some sherds of Period III had been uncovered. This can mean only that there was a Roman refuse hole, the walls of which had disintegrated beyond recognition.

All together seven refuse pits were uncovered at various levels. Their dimensions were as follows:

Pit No.	Depth below Surface	Depth of Pit	Diameter at Top	Diameter at Bottom
14.....	.70	.40	1.55	1.55
15.....	.80	.65	.95	.95
16.....	1.00	1.15	1.50	1.10
17.....	1.00	2.90	1.35	1.80
18.....	1.20	1.20	1.20	1.15
19.....	1.00	1.20	1.10	1.10
20.....	2.60	1.10	1.45	1.55

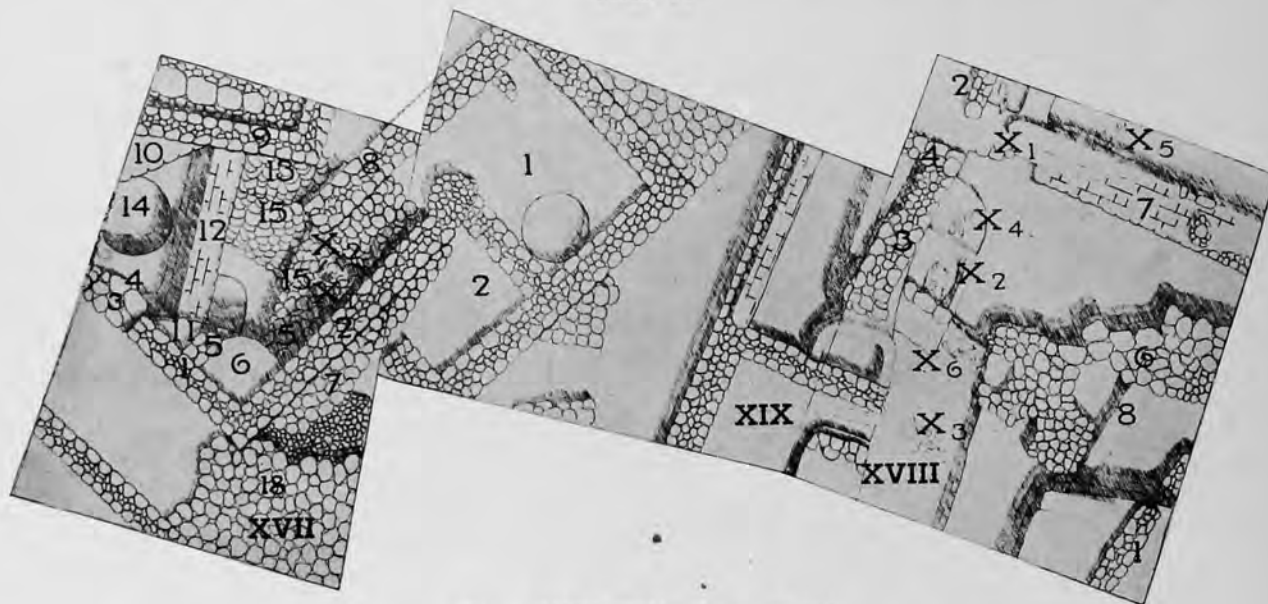


## THE ALISHAR HÜYÜK

## THE SOUTHERN TRENCH (MAPS 18-20)

PLOT XVIII (MAP 18 AND FIGS. 129-30).—Of recent walls, only a few scattered remains were struck in this plot: a short wall (No. 1) in the southeast corner, .70 from the surface, and a second wall (No. 2) at the northwest corner, .60-.85 down, each one layer high. Somewhat deeper (1.05), but probably belonging to the level of Nos. 1 and 2, Walls 3 and 4 formed the corner of a room near the west side of the plot. Both were only one layer high. In general, the

MAP 18



PLOTS XVII-XIX. SCALE, 1:200

situation resembled that in Plots X-XII, where recent occupations were not represented.

At a depth of 1.55 a skeleton ( $X_1$ ), rather badly disintegrated, was uncovered. The slab on which this skeleton lay was situated on top of a *kerpich* wall which later proved to have been built on an irregular stone foundation. The latter sloped upward from east to west, the distances from its foot to the surface varying from 3.30 to 2.60. The *kerpich* layer was preserved in places to a height of .90.

An area (No. 6) paved with stone slabs covered part of the plot. In places this pavement was somewhat above the level of the stone foundation of Wall 7, but it was probably constructed at the same time as the latter. The distance to the surface was 2.80 at the east end of the pavement. The edge of a *kerpich* wall

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(No. 8) was uncovered within the paved area, but after a short distance it disappeared below a block of soil on top of which we had left the remains of a more recent *kerpich* wall until by excavation of the adjacent section its course could be determined. Five more burials were found below the level of the paved area and somewhat below the foot of Wall 7. Depths of excavation were: east, between Wall 7 and stone pavement, 4.00; southwest corner, 3.50; center, south of Wall 7, 3.90.

Plot XIX (MAP 18).—Two well-preserved room-divisions were here uncovered, the average distance from the upper edge of their walls to the surface



FIG. 129.—PLOT XVIII. START OF EXCAVATION; MOUND A IN BACKGROUND (FROM EAST)

being .50. Their type of construction corresponded to that of Walls 1 and 2 of Plot XVII. In Room 1 the walls rose .55 from a hard-tramped floor. Three or four layers were preserved; their average width, hardly changing, was .80. In the southeast corner of the room a soft spot in the floor, found filled with ashes, was probably the hearth. The sherds contained in this depression were mixed—fine Roman red ware and Period III painted buff ware—simply because the hole had been dug through into the earlier deposit. The contents of the room interior above the floor were principally Roman sherds, but there appeared also some painted buff sherds which had probably found their way through the hole. A paved strip accompanied the north wall, paralleling the situation at Wall 2 of Plot XVII (see below). The situation in Room 2 was similar to that in Room

1; the south wall, however, was fragmentary. The west wall was formed by Wall 8 of Plot XVII. These rooms may be only slightly earlier than the room formed by Walls 1 and 2 of Plot XVII; for the latter, though it has the same orientation, is at a slightly higher level, and its east wall seems to cut through the south wall of Room 2.

A stone pavement was uncovered .70 below the foot level of the east wall of Rooms 1 and 2. Only a part of this pavement was visible; most of it was



FIG. 130.—PLOT XVIII. BOTTOM OF EXCAVATION; STRATIGRAPHIC ANNEX OF PLOT X IN BACKGROUND

seemingly hidden below the later structures. Eighty centimeters below the level of the same wall we struck the upper edge of a badly defined *kerpich* wall which rested on a foundation of irregularly set stones. The foundation was 1.60 high and extended all through the plot, while the *kerpich* layer on top was preserved for only half the distance. At the south end of this *kerpich* layer its character as a wall was already doubtful. No contours of bricks were visible, only the markings of straw once mixed with the soil. But these straw markings occur also in crumbled-off remains of walls. From the east a stone wall abutted the stone

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foundation. No *kerpich* was found on its top. Above it a refuse hole had been dug during a later occupation. The bottom of the hole was .60 above the present upper edge of the wall. These two walls belong to a layer probably somewhat older than Wall 7 and the stone pavement of Plot XVIII. Excavation in this plot was carried to the foot of the north-south wall, 4.40 below the surface at its north end and 4.20 at its south end.



FIG. 131.—PLOT XVII. WALL REMAINS; WORK IN PLOTS XIX AND XVIII IN BACKGROUND

PLOT XVII (MAP 18 AND FIGS. 131-32).—Part of Room 2 of Plot XIV, which lay below Wall 1 of that plot (see below), was found in Plot XVII. Wall 1 here was continued at right angles by a similar wall (No. 2). Both were three to four layers high and .75 broad. Their distance from the surface averaged .30. Near the west wall of the plot there was an entrance (No. 3) in Wall 1, indicated by the lack of wall stones and by flat slabs (No. 4) extending .40 into the inclosure. Two short walls (No. 5) extended from Walls 1 and 2 at the southeast corner, forming a section in which fragments of a crude sort of fire pot were found (No. 6), but with few ashes.



Along the east side of Wall 2 extended a pavement (No. 7) averaging .70 in breadth and situated on a level with the upper edge of the wall (in part, .10 below). This pavement was continued in the southeast corner (No. 18). Wall 8, somewhat below the level of Walls 1 and 2, extended almost parallel to Wall 2. It was only one layer high, .85 broad. It formed part of Room 2 of Plot XIX.

Wall 9, accompanied on the north by a paved area, extended to the surface (partly .10 below) and belonged to the highest level, that of Wall 1 in Plot XIV



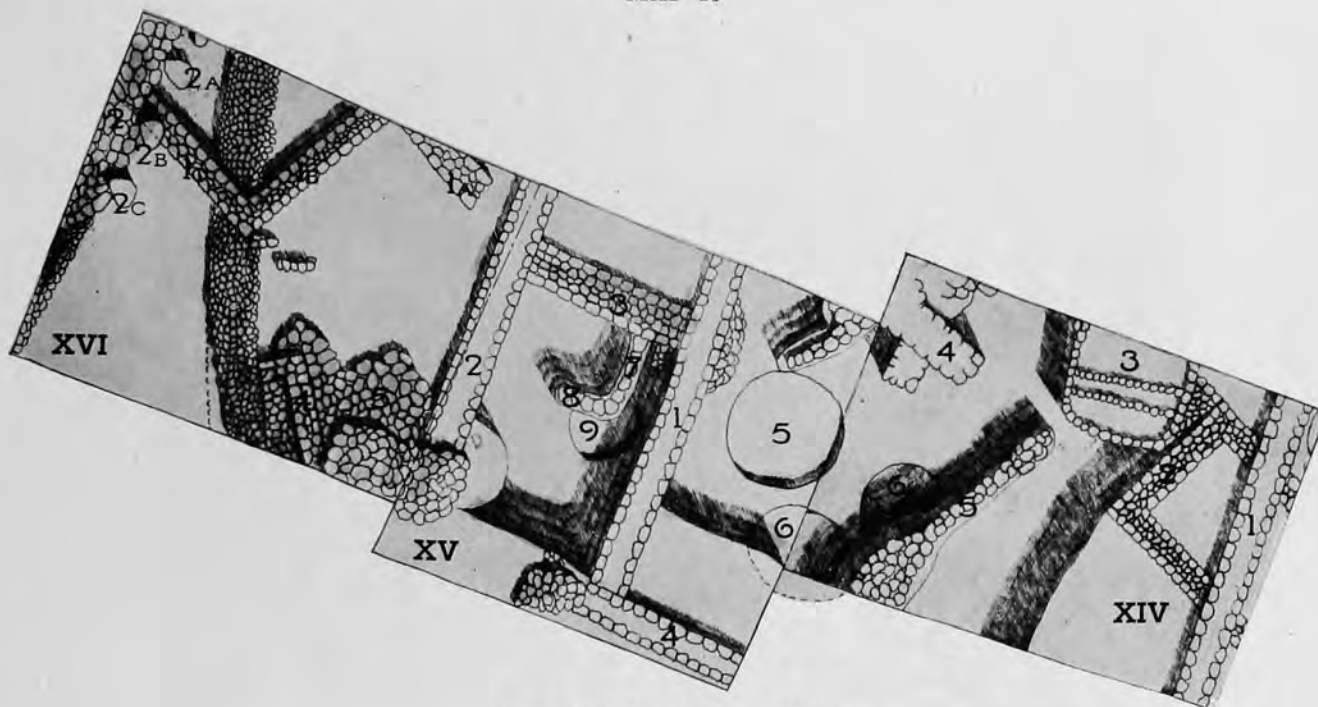
FIG. 132.—PLOT XVII. A MORTAR-LIKE OBJECT (IN CENTER OF FOREGROUND)

(see below). A short wall (No. 10) extending across the northwest corner of the plot corresponded in depth to the lower rows of Walls 1 and 2. A wall fragment (No. 11) extended from the lower edge of Wall 1 downward, reaching somewhat underneath Wall 1. It had been built on a *kerpich* wall (No. 12). Walls 11 and 12 represented two more domiciliary strata. The stone foundation of Wall 12 abutted a stone wall (No. 13), possibly the foundation of another *kerpich* wall the perishable part of which had crumbled off. Wall 12 was .90 high, inclusive of the stone foundation, which had a height of .35. The foot of Wall 12 was

3.10 below the surface. Skeleton X<sub>1</sub>, accompanied by two mortuary pots of our Period II, was level with the foot of the *kerpich* layer of Wall 12.

There was a corner formed by two crude stone walls (No. 15) directly below the level of the foot of Wall 12. The average height of these walls was .50-.60. Their position below the level of the Period II burial is significant. Their irregular construction links them with the corresponding Wall 7 in Plot XVIII

MAP 19



PLOTS XIV-XVI. SCALE, 1:200

and the lowest walls of Plot XIX, which were associated with red-slipped pottery of Period I. However, it must be remembered that the stratum of Period II reached to the original surface in Plots XIV and XV.

West of Wall 12 a refuse pit (No. 14) was uncovered 3.70 below the surface. Its depth was 1.30. In the corner (No. 15) the excavation was carried to a depth of 4.70.

PLOT XIV (MAP 19).—At a depth of .20 a wall (No. 1) of a hitherto unknown type appeared, consisting of two rows of stones .35 apart, the interval being filled with ordinary soil. It was .85 broad and two layers deep. This wall was superimposed on a rectangular room (No. 2), part of which (as noted

above) lay in Plot XVII. The room had a decidedly different orientation. Its very well built walls were two layers deep and .65 wide. The outside stones were carefully selected, producing fine, straight edges.

Fifty centimeters below the west wall of the room a roughly oval arrangement of small stones was uncovered (No. 3; Fig. 133). A double row of stones, .40 apart in the center and somewhat converging toward the ends, followed the



FIG. 133.—PLOT XIV. PECULIAR ARRANGEMENT OF STONES AT NORTH WALL OF PLOT

long axis. A frail one-stone wall rose at the east end to a height of .10 above the edge of the west wall of Room 2.<sup>1</sup>

At a depth of 1.40 a paved strip (No. 4), 2.40 long by .85 broad, extended eastward from the northwest corner of the plot. From the southwest corner a single row of stones (No. 5) extended northeastward. Its depth was 2.00; the breadth of its one layer was .35. Except for Pit 6, extending into the original

<sup>1</sup> When Ismael, the foreman, saw this peculiar arrangement of stones, he said it might be a Turkish grave, except that the headstone was missing. The orientation, however, differed from that used in Turkish cemeteries.

soil, no more structural remains were found below this level. Depth of excavation was 6.50, and original surface was struck at 6.00.

Three distinct levels were indicated by Walls 1, 2, and 5 respectively. They were most probably Osmanli, Roman, and Period III. A fourth level was indicated solely by pottery. The painted buff ware disappeared at 3.00 and Period II pottery appeared. Long bill-spouts with triangular offsets, also



FIG. 134.—PLOT XIV. EXCAVATING IN THE PERIOD II LAYER, WHERE A CYLINDER SEAL (FIELD No. 3103) WAS FOUND

pointed-bottom bowls and pitcher fragments, of that period were frequent. Red-slipped pottery seemed to increase with depth. A pointed-bottom bowl, grayish yellow, grainy, wheel-marked, appeared at a depth of 4.50 (Field No. 3257). Right beside it lay a pointed-bottom pitcher with round, high handle (Field No. 3135). Another pointed-bottom bowl, grainy and grayish yellow (Field No. 3134), was found at 4.30. A well-worked cylinder seal (Field No. 3103) representing a number of persons, animals, and symbols was found at a depth of 3.00–3.50 (cf. Fig. 134).



PLOT XV (MAP 19).—At .10–.20 Walls 1 and 2 were uncovered, corresponding in depth to Wall 1 of Plot XIV. They were of stone with dirt filling (Fig. 135). Wall 3, wholly of stone, connected the two. All three walls were three layers deep. Wall 4, belonging to this same complex and extending eastward from Wall 1, also consisted of two rows of stones with dirt filling. The breadths of the walls were: No. 1, 1.10; No. 2, 1.00; No. 3, 1.20; No. 4, .80–.90. In the



FIG. 135.—PLOT XV. WALLS WITH BORDER-STONES AND DIRT FILLING

room north of Wall 3 a hard-tramped floor was found at a depth of .70 from the surface and .55 below the edge of Wall 3. Here the work was not continued.

In the central room, where excavation was carried below the bases of Walls 1–3 which inclosed it (Fig. 136), a floor was found at 1.50. East of Wall 1 the upper edge of a badly defined pit (No. 5) was found at 1.30. Its depth was .55; its diameter, 1.45. At a depth of 2.10 a fine fragmentary millstone with perforated concave center, raised rim, and a triangular hole at one side was uncovered.

With the exception of a corner formed by Walls 7 and 8, 2.50 below the foot

## THE EXCAVATED AREAS

of Wall 3 and 3.30 below the surface, no more architecture was uncovered in this plot. Here, as in Plot XIV, the excavation was carried to the bottom of the culture deposit. In the center of Plot XV the excavation was concluded at a depth of 6.40. Pits 5, 6, and 9 (Fig. 137) reached still .20 below this level. The original surface, struck at 5.90, was marked as at other places by light-colored soil and by absence of ashes, charcoal particles, and objects of human manufacture.

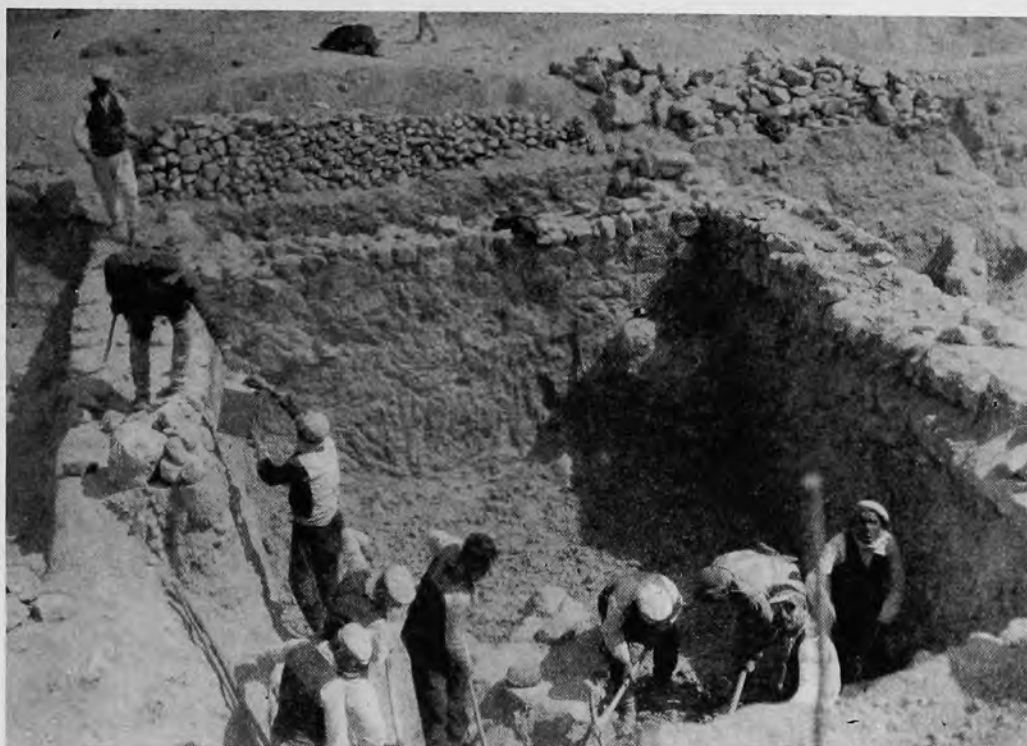


FIG. 136.—PLOT XV. EXCAVATING INSIDE A ROOM BELOW ITS FLOOR

As to the pottery, recent (glazed Turkish) sherds occurred to a depth of 1.00. Painted buff ware (Period III) increased in quantity from 1.00 downward with its apex at 1.50 to 2.00, then decreased, while yellowish brown grainy (Period II) increased and some red-slipped sherds (Period I) were found. This situation at the bottom paralleled that in Plot XIV, inasmuch as the Period II pottery extended to the very base of the deposit, while scattered sherds, but no definite layer, of Period I could be distinguished.

Here a fact must be mentioned which will be emphasized below. During the

successive occupations of this site, as probably of others, the latecomers did not necessarily construct all their buildings on top of the ruins of their predecessors. Structures of periods far apart in time may therefore be found on exactly the same levels, or the more recent ones may even lie below the level of the older ones. This explains the fact that remains of our Period II extended to the original surface without being superimposed on a definite layer of Period I.

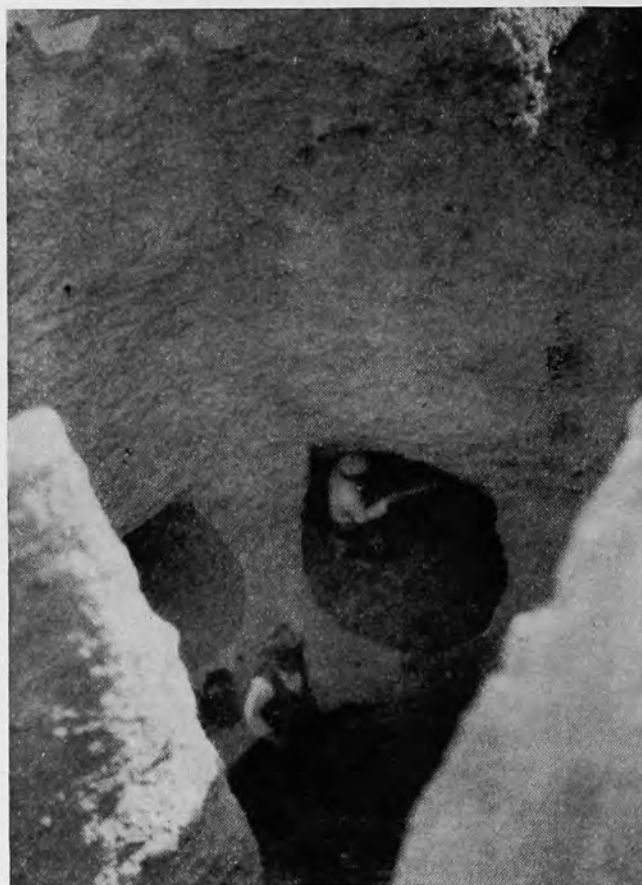


FIG. 137.—PLOTS XIV–XV. REFUSE PITS AT THE BOTTOM OF THE CULTURE DEPOSIT

PLOT XVI (MAP 19).—Walls 1 *a-c*, which, according to their structure, orientation, and depth, belonged with the rooms of Plots XVII and XIX, were uncovered .35–.50 from the surface. A continuation of Wall 1 *a* would run underneath Wall 2 of Plot XV. The average width of these walls was .75, and their average height .40–.60 (two to three layers). Oriented differently but at

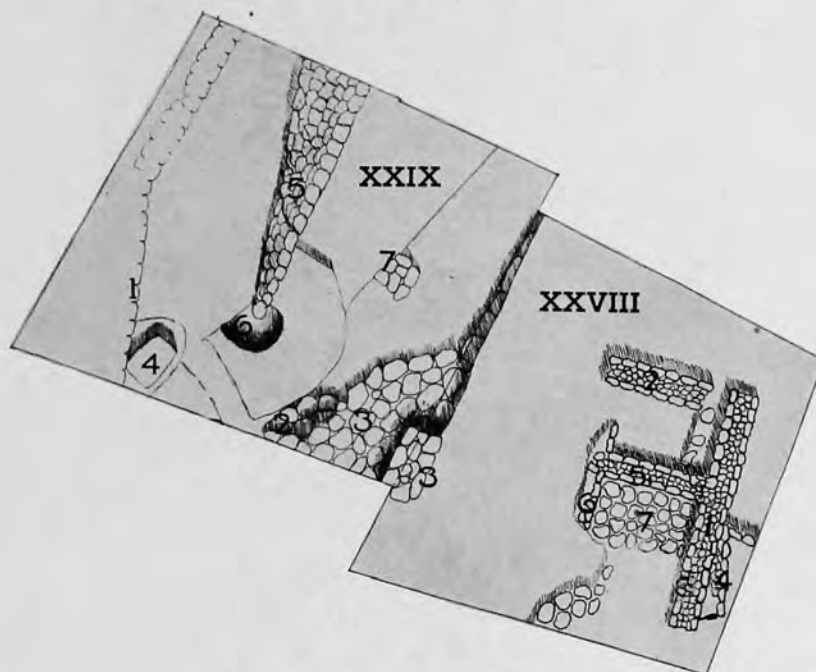
## THE EXCAVATED AREAS

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about the same level, part of a room formed by Wall 4 extended into the plot from the south. Pavement 5, of irregular outline, level with the upper edge of Wall 4, filled the southeast part of the plot.

At a depth of .35 another pavement (No. 2) extended from the west into the plot. At a level with the upper edge of Wall 1 or slightly higher, three big rocks (Nos. 2 *a-c*) bordered Pavement 2. They were set in line, reminding one of the arrangement of rocks in Plots 27 and 32.

MAP 20



PLOTS XXVIII-XXIX. SCALE, 1:200

The excavations were carried to various depths, as follows: northwest room, 1.50; southwest, 1.50; northeast, 1.50; to Pavement 5, .80; to Pavement 2, .45.

PLOT XXVIII (MAP 20).—This plot was excavated west of Plot XVI. However, for technical reasons a road 4.00 broad was left untouched between the two plots. Two layers of wall remains were found. The more recent structures included Walls 1-3. The lower edge of Wall 1 was .80 from the surface; it was one to two layers high. All three walls were on the same level and were of "border-stones and filling" type.

The lower structural complex was represented by Walls 4-6, inclosing a



room paved with stone slabs (No. 7). Wall 4, although almost concealed by Wall 1 above it, had a slightly different alignment. Toward the south, therefore, its edge was visible east of Wall 1. It was only one layer high. The distance from the surface to its base was 1.10. The remains of Wall 5 reached .50



FIG. 138.—PLOT XXIX. THE LAST PLOT EXCAVATED AT THE FOOT OF MOUND A

above the pavement; those of Wall 6, .20. They were of the same type as Walls 1-3.

The pavement covered only the northern part of the room. About .10 above the level where it might have been expected south of its present margin, a fragmentary skull ( $X_1$ ) was found. Rocks which seemed to have fallen from Wall 6 were found on top of three skeletons ( $X_{2-4}$ ) discovered just outside and west of the room.

The excavation was carried to a depth of 2.40 (east wall) and 2.60 (north wall).

PLOT XXIX (MAP 20 AND FIG. 138).—Only one wall (No. 1) of relatively recent origin was uncovered. Although 1.60 below the surface on account of the slope ascending here to Mound A, it was on approximately the same level as Walls 1 and 3 of Plot XXVIII and was constructed in the same manner. Only one layer of stones was left.



FIG. 139.—PLOT VIII. A TURKISH STRUCTURE WITH FIREPLACE IN ROOM IN FOREGROUND

At a considerably lower level, Wall 2 appeared. Its foot was 4.20 below the surface. Its height was 1.20. It was built of rather large border-stones with filling. Rocks (No. 3) found west of this wall fragment and about .50 below its upper edge may be the remains of a wall which abutted Wall 2 from the east. To the same level belonged two big boulders (No. 4) and Wall 5. The latter looked rather like part of the stone facing of an embankment, since it was inclined and was only one stone thick (.20-.25). Its upper edge, overhanging 1.00 toward the east, was somewhat above the upper edge of Wall 2; but its foot was about

.30 below that of the latter wall. At its south end a refuse pit (No. 6) was found, .90 in diameter and .90 deep, its upper edge being on a level with the upper edge of Wall 5.

At 5.80 a floor (No. 7) was struck which had seemingly been made of small stones, sand, and lime. This exceedingly hard-cemented mass may have been the floor of a building. It adjoined at its northern end a similarly paved but somewhat elevated and irregular area.



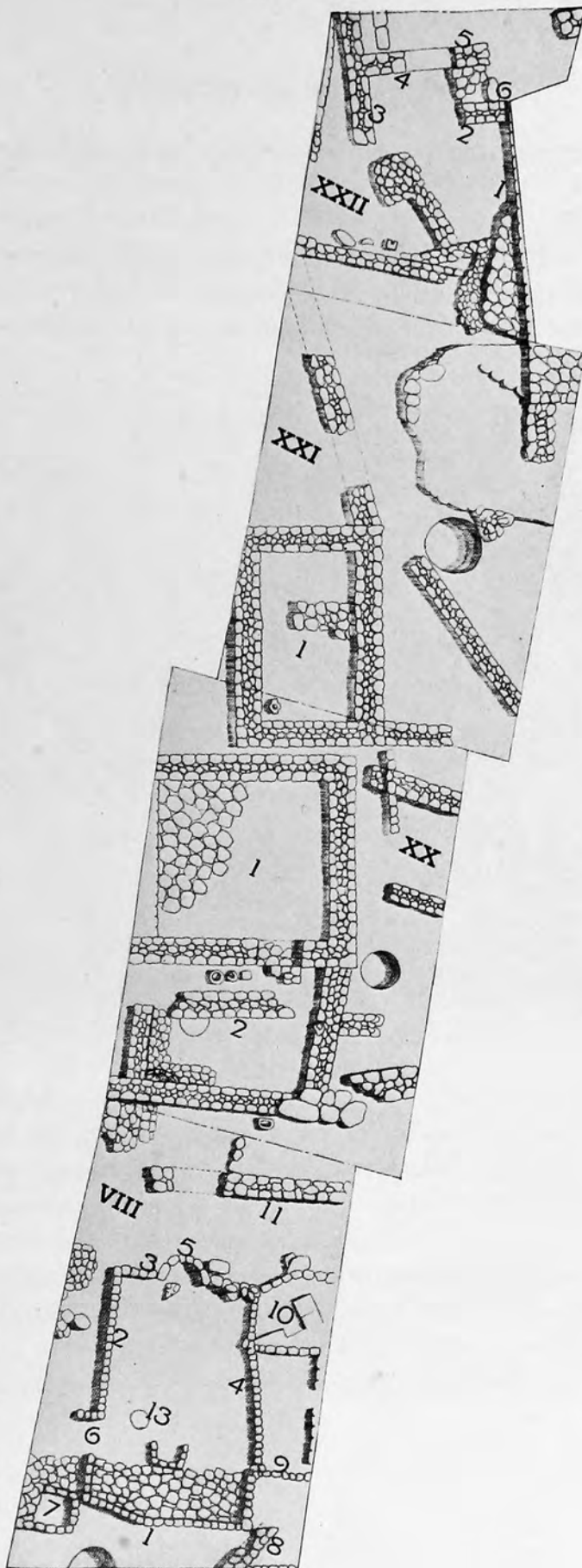
FIG. 140.—PLOT VIII. WOOD REMAINS OUTSIDE THE NORTHWEST CORNER OF A TURKISH ROOM

An extraordinarily thick stratum of our Period III was encountered in this plot. From near the surface to the very bottom of the excavation, 6.00 below, the painted varieties of Period III pottery occurred, i.e., at a depth where in other plots layers of preceding periods were struck.

#### THE NORTHERN TRENCH (MAPS 21-22)

PLOT VIII (MAP 21).—The situation here nearly paralleled that encountered in Plot VII (p. 130). A structure of recent origin (Fig. 139) was uncovered, identical in style with the room found in that plot. Its walls were made partly

MAP 21



PLOTS VIII AND XX-XXII. SCALE, 1:200



of one-stone layers and partly of upright slabs, the whole giving a very fragile impression.

A fireplace (No. 5), here situated in the north wall, was built after the same pattern as that of Plot VII. However, no pottery pavement was present, and the corners were made of upright slabs .90 and .95 high. A doorway (No. 6) was situated in the west wall. Here the corner stones were of the usual size. In



FIG. 141.—PLOT VIII. A BYZANTINE TOMBSTONE RE-USED IN A TURKISH ROOM

front of the opening, inside the room, a second fireplace was uncovered. It was a fire pot .50 in diameter, .35 deep, and .03 thick, made of the ordinary brittle brown earthenware used for such purposes. Its side was blackened by fire.

Right outside the northwest corner of the room, at the angle formed by Walls 2 and 3, the decayed fragment of a supporting timber was found (Fig. 140). It was .25 high, .11 in diameter, and rested on a roughly circular stone slab .10 below the foot of the two walls. The Turkish laborers called the wood *ardich*, and said that it was red and hard when freshly cut.

In front of Fireplace 5 a fragmentary Byzantine tombstone, bearing part of

a square cross in relief (Fig. 141), was found among other stone blocks which filled the interior of the room. There can be no doubt that it had been used secondarily in a wall of this room. Without considering other evidence, this criterion would be sufficient to determine the relatively recent origin of the structure.

Walls of the same type as those mentioned above were Nos. 7-9 and the wall bordering Pit 10 on the north. At the bottom of Pit 10, which reached 1.00



FIG. 142.—PLOT XX. ROOF TILES IN ROOM 1

downward from the foot of Wall 4, a few *kerpich* bricks were uncovered, probably part of an older wall which extended below the floor of the room. The pit itself was not well defined. It may have been a mere depression filled with refuse.

Wall 11, though on the same level as the others, was built in a different manner. It consisted of two rows of stones with some small stone filling. It was two layers high, and its edges were rather straight.

The average distance from the lower edges of these structures to the surface

was 1.00. Within the room and south and west of it the excavation was carried to this depth, representing the floor level. The section east of the room was excavated to a depth of 1.60 (in Pit 10, 2.00), that north of the room to a depth of 2.00.

PLOT XX (MAP 21).—Here two complete rooms were uncovered, inclosed by well-set walls. Those of Room 1 were especially well preserved. They rose .90 above the slab-paved floor and were in places not more than .10 below the



FIG. 143.—PLOT XX. DOMESTIC EQUIPMENT IN STONE, AS FOUND IN ROOM 2

surface. The pavement was slightly uneven, its western portion being about .10 higher than its eastern end. Room 1 was filled with masses of complete and broken tiles, roughly rectangular and semitubular—the remains of its roof (Fig. 142). The rectangular tiles were .48 long and .34 and .30 broad at opposite ends. Their rims, running around three sides, were .03 broad on the long sides and .02 broad at the 34-centimeter top. The top rim was lower in order to fit scale-like below another tile. The thickness of these tiles was .02 plus height of rim. The semitubular tiles were .45 long, .20 broad, .09 high, .025 thick. They fitted over the edges of the rectangular ones.



FIG. 144.—PLOT XX. STONE WITH CIRCULAR GROOVE AND "OUTLET"



Several pots which appeared below the débris were very similar in type to recent Turkish plain ware. Particularly suggestive was a pitcher neck supplied with fine grooves, three together encircling the vessel at definite intervals. This pot appeared .45 below the edge of the north wall. A bottle was lying .05 above the upper edge of the partly disintegrated west wall (.80 below the surface). A tubular pot without bottom was found .45 below the edge of the east wall.

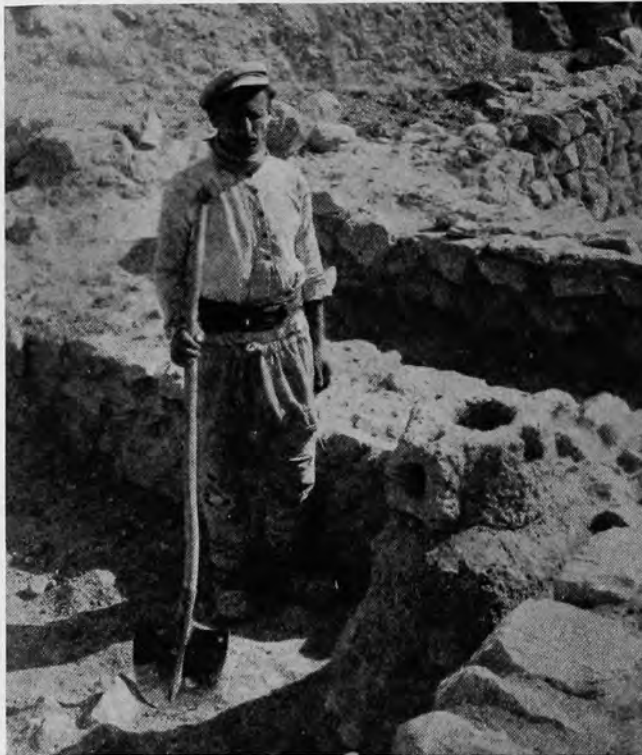


FIG. 145.—PLOT XXI. HAND MILL OF ODD SHAPE

This, the only room found to date where roof remains were present, must have represented an important structure in the series of contemporaneous rooms of Plots VIII and XX-XXIV. No criteria other than the pots were found for assigning the room to a definite period. However, its position directly beneath the surface, the use of roof tiles (the semitubular tiles are commonly used in the modern city of Yozgad), and the suspiciously recent appearance of the vessels all suggest that both this structure and the associated ones are Osmanli.

Room 2, a sort of anteroom of the first one and connected with it by a door-

way 1.20 wide, bordered by well-cut or selected rocks, contained an interesting assortment of domestic equipment in stone (Fig. 143). All the objects were standing along the north wall, on or somewhat above the floor, which here consisted of hard-tramped soil. There was a hand mill of irregularly circular

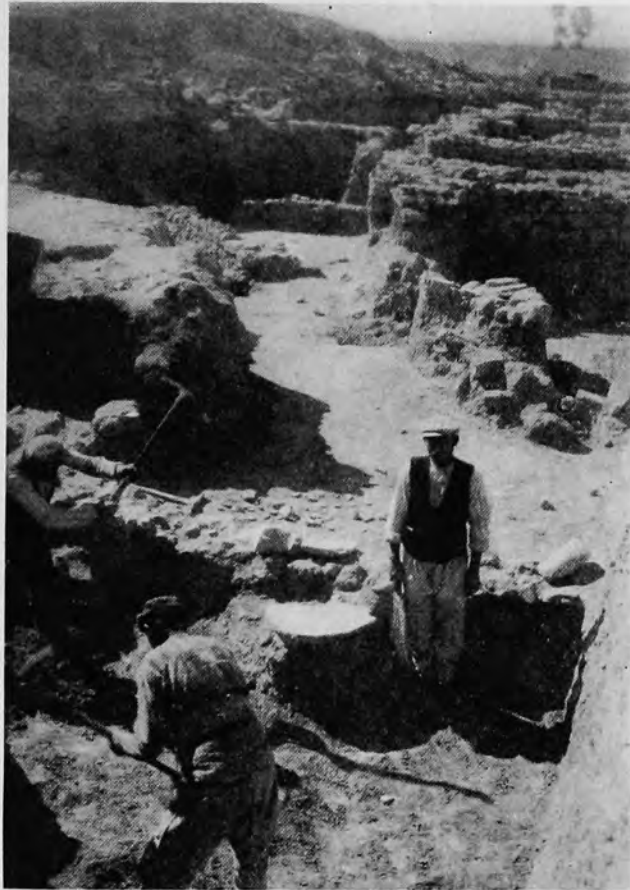


FIG. 146.—PLOT XXII. HAND MILL IN AN ENCLOSURE OLDER THAN THE STRUCTURES IN BACKGROUND

shape .40 broad and .20 high, its grinding surface very smooth and without any rim. At its side was a mortar-like stone with a conical depression .23 deep and .30 wide at the top. A conical, truncated foot, smooth all around as though ground by a rotating movement, extended .30 below the somewhat rectangular upper part. The whole specimen was .53 long and .42 broad. Beside it lay another "mortar," but footless, upside down. This one was .42 broad, its pounding or grinding hole .28 wide at the top and .27 deep. The whole object

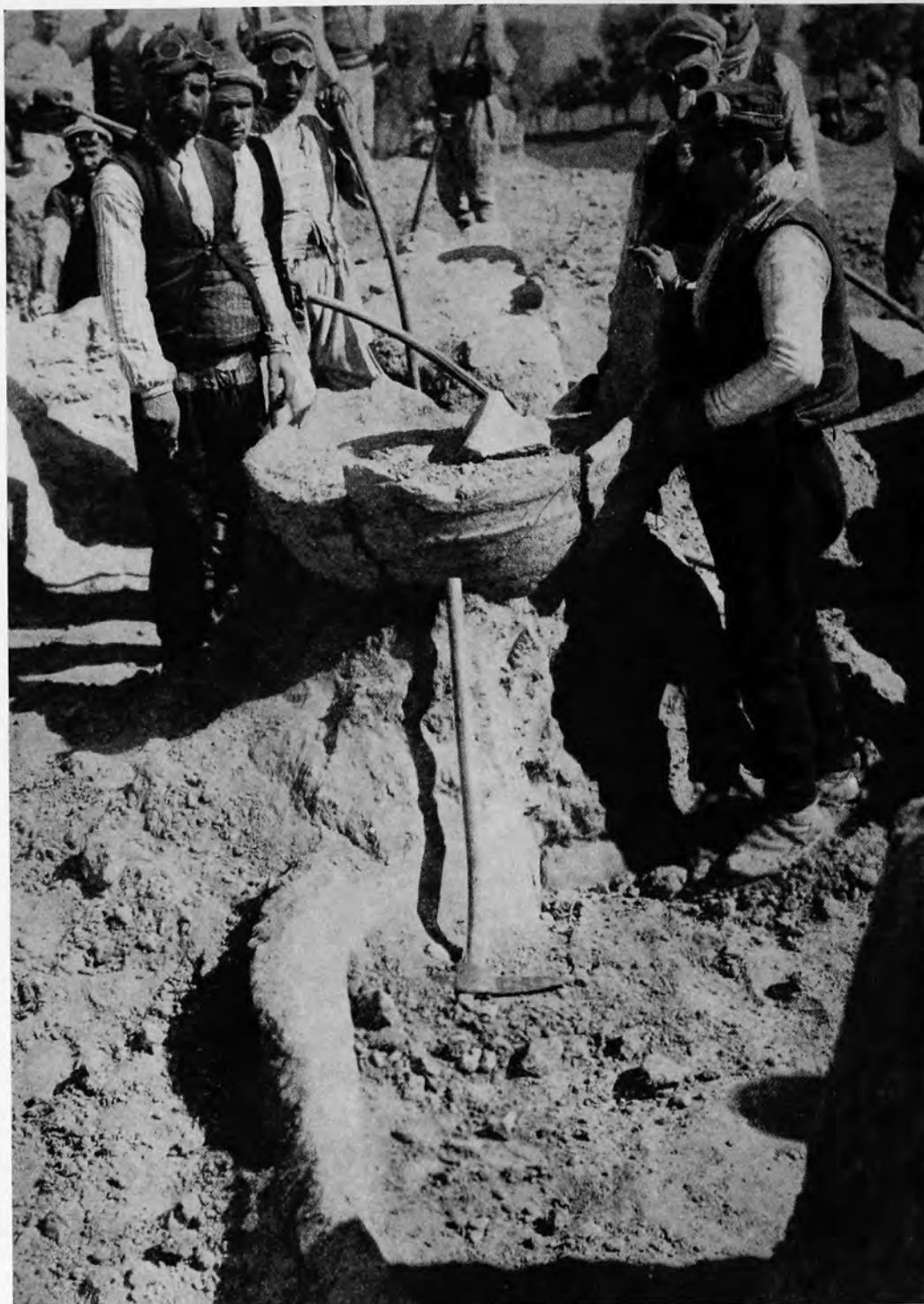


FIG. 147.—PLOT XXIII. RIM OF BATH, WITH LARGE VESSEL ABOVE IT

was .38 long. One half was broken off. A small hand mill situated near the two "mortars" had seemingly been built into an older wall which crossed the room here .50 below the edge of the east wall, where it abutted. A fragmentary storage jar was found on top of this older wall at the same level as the other objects. A cubical stone found near the entrance to the main room was lying in a line with the rest.



FIG. 148.—PLOT XXIII. BATH AFTER EXCAVATION

Leaning toward the south wall, a small semicircular inclosure 1.20 long and .40 wide was uncovered. Its upper edge was on a level with the edge of the wall. It was composed principally of small stones three layers deep, the uppermost consisting of tile fragments. It did not contain any ashes. It had probably been used as a storage bin.

A rectangular stone block (Fig. 144) was leaning against the outside (south)



of the south wall, its upper edge on a level with the corresponding edge of the wall. The block was .60 long, .42 broad, and .26 high. There was a rounded depression in its upper face .37 long, .19 wide, and .10 deep. On the opposite side was a circular groove with a diameter of .32, the groove being .02 wide and .01 deep. There was an "outlet" at one corner; and the area inclosed by the groove was subdivided by means of eight strokes .06 long at an average, pointing at irregular intervals from the periphery toward the center.

PLOT XXI (MAP 21).—Running parallel to the north wall of Room 1 of Plot XX, but separated from it by .40 of soil, the south wall of Room 1 of Plot

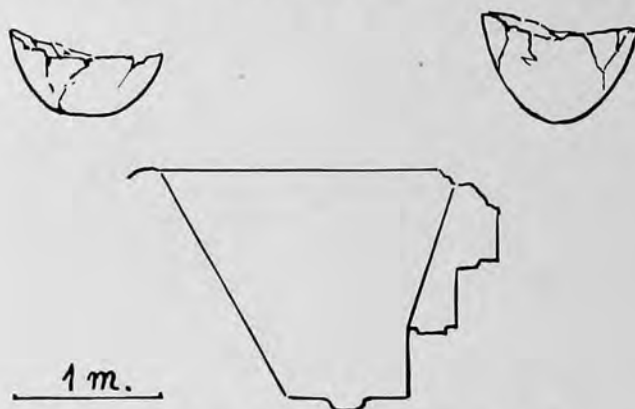


FIG. 149.—PLOT XXIII. DIAGRAM OF BATH

XXI was found. It was only .50 high, while the former wall had a height of .90; but parts of the other three walls of this room rose as high as .90 above the hard-tramped floor. The breadth of the walls varied between .75 and .85. The interstices between the wall stones, here as in Plot XX, were filled with ordinary mud not harder than the room-filling of soil. A hand mill (Fig. 145) was found in the southwest corner, but not on the floor. Its lower edge was on a level with the upper edge of the south wall.

This hand mill had a peculiar form, circular with two rectangular offsets opposite each other. Its length was .53; width, .40; height, .26. A hole in the center extended through the stone. At the top it was .30 wide, narrowing to .17 below. One of the offsets was pierced by a vertical hole .04 wide which opened from both above and below into a rectangular depression .09 wide and .08 deep, cut in from the end. On the lower surface of the mill two more rectangular depressions were found, .04 wide and .09 deep, cut into the sides. The various small holes were probably made for the attachment of handles. The central

hole was the grinding hole and might have fitted over the conical protuberances of certain stones already described (Plot XVII; Plot XX, Room 2).

A short wall fragment abutted the northeast corner of the room, but not exactly in continuation of the east wall. Another part of a wall seems by its orientation to have been once connected with it.

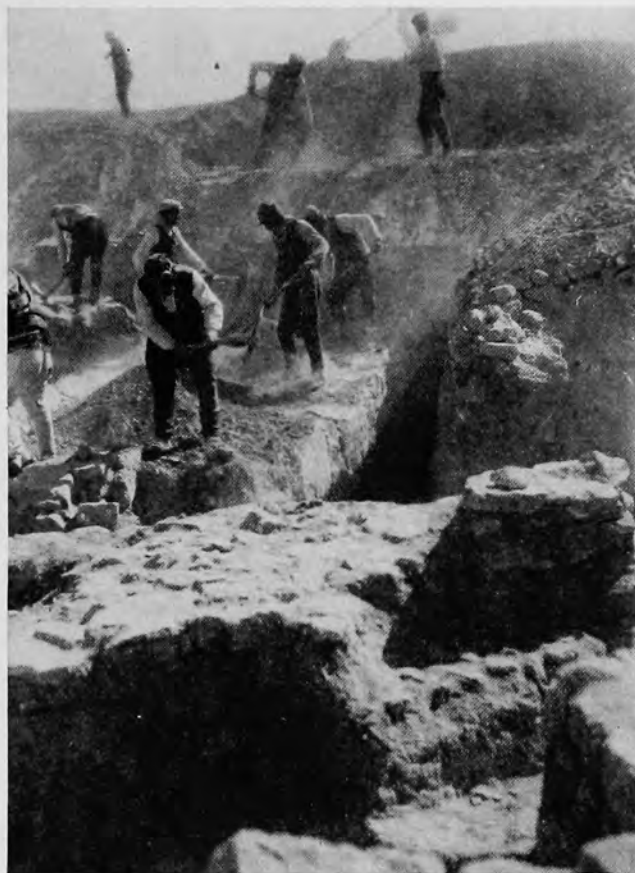


FIG. 150.—PLOT XXIII. WORK ON WALL 24

The northeastern corner of the plot was covered with a paved floor .05 thick, made seemingly of white *kerpich* earth, mixed with small stones and water, on a rubble foundation. It was .60 below the surface, i.e., almost up to a level with the upper edge of the room inclosure. Extending north to south and rising about .50 above this floor, a badly built wall composed of irregular stones was uncovered. A fragment of a crude vessel was situated near the south end of the wall, sunk into the floor.

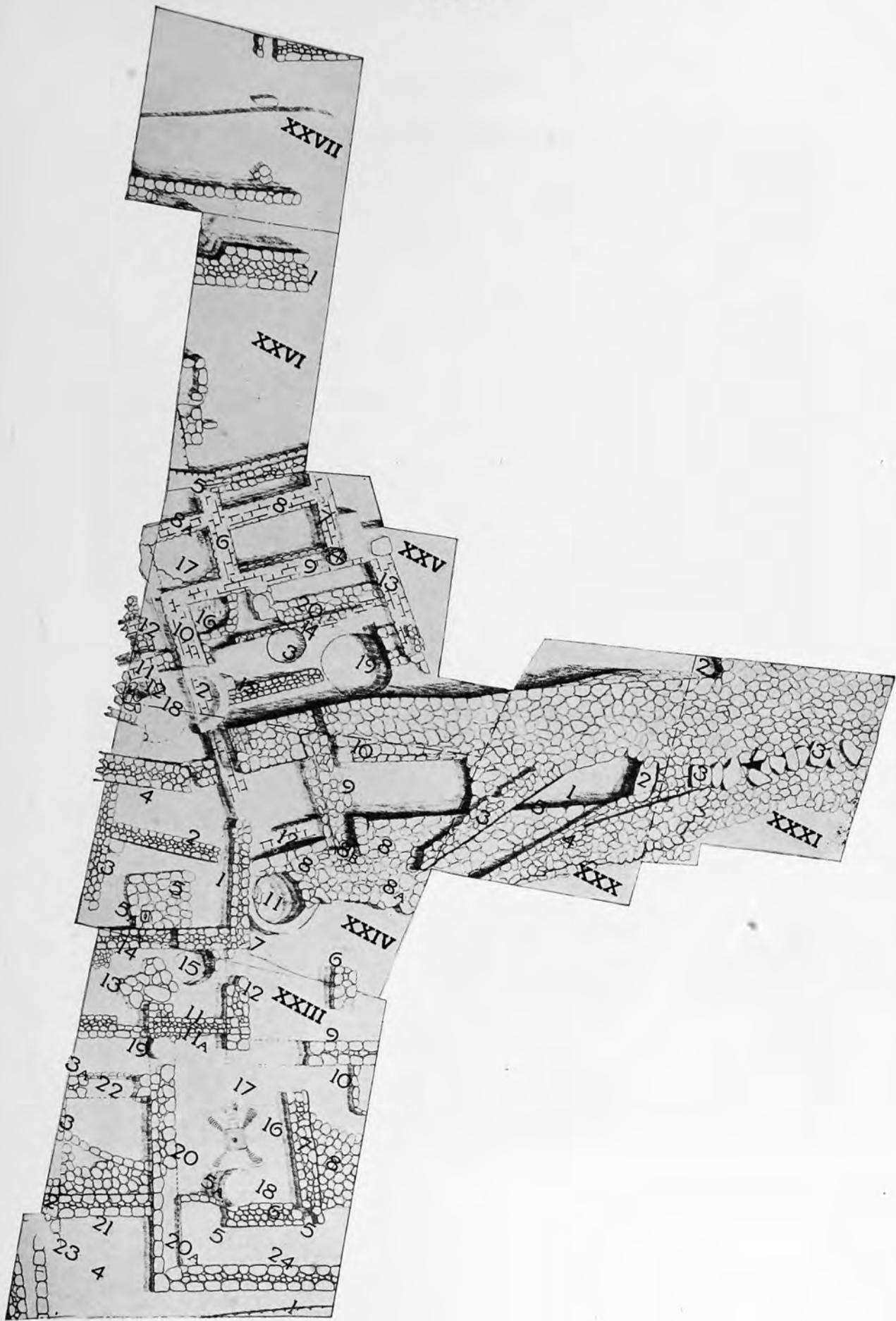
PLOT XXII (MAP 21).—The recent architectural complex indicated in Plot XXI by the room, the pavement, and the wall rising above it was continued in Plot XXII. The last-mentioned wall (No. 1) extended almost through the whole plot, abutting at right angles near the northeast corner another but shorter wall (No. 2). That there may possibly have been a gateway at this place is suggested by the course of Walls 3 and 4, which end near by. They form, together with Walls 1 and 2 and a wall fragment (No. 5), a rectangular inclosure open toward the south and with a narrow opening toward the north. The area delimited by Wall 2, Wall 5, and a big stone (No. 6) on the east was partly paved with flat stone slabs.

When the excavation was continued, other walls appeared on a lower level, their upper edges being 1.40–1.60 below the surface. Leaning toward the south wall of the room inclosed by them, a hand mill was found .10 deeper than the upper edge of that wall (Fig. 146). It was simply a roughly rectangular slab .60 long, .38 broad, and .08 thick, smooth on its upper face and somewhat curved by the grinding process. An elliptical hand mill  $.38 \times .20 \times .08$ , smaller, yet too large to have been used instead as a hand stone for a mill, was lying beside the first. A fragment of a third hand mill was found 1.00 away from the other two. Part of a rectangular depression was visible on one side; the grinding surface was on its opposite face.

PLOT XXIII (MAP 22).—The situation in Plot XXIII was rather complicated, with varied types and levels of both wall remains and pavements. Two distinct levels were noticed. The upper was represented by Wall 1; the continuation of Wall 3 of Plot XXII; a paved area (No. 2); Wall 3; a slab and rubble pavement (No. 4); Pavement 5; a short stone wall (No. 6) on top of the latter, almost abutting Wall 7, east of which a pavement (No. 8) extended; Wall 9, with Wall 10 abutting it; Wall 11; possibly Wall 11 *a*; Walls 12 and 14; and Pavement 13.

Wall 1 may well represent the continuation of Walls 4 and 5 of Plot XXII. It reached to the very surface and was six to seven layers high, measuring 1.00 at its highest point. It was composed of rather small stones irregularly set, the upper rows slightly overhanging. The continuation of Wall 3 of Plot XXII extended across the southwest corner of Plot XXIII, reaching the west wall of the plot .20 below the surface. Three rather well built layers remained, .60 high. Pavement 2, built of slabs, was .50 below the surface.

The east side of Wall 3 was visible at the west wall of the plot. It was 1.00



PLOTS XXIII-XXVII AND XXX-XXXI. SCALE, 1:200





FIG. 151.—PLOT XXIV. ROMAN REFUSE PIT; BEHIND IT, ONE MAN AT EACH POSTERN OF THE TOWN WALL (FROM SOUTHWEST)

high. The uppermost of the five layers left reached within .20 of the surface. The two lower layers were made of larger stones than were the upper ones; the latter receded about .10, forming an offset. A short wall fragment (No. 3 *a*) abutted the north end of this wall. Its two layers measured .45 in total height and .80 in breadth. Its upper edge was .90 from the surface.

A rubble- and slab-covered area (No. 4) 7.10 long and 1-2 meters broad, lying .30 below the surface, extended from Walls 4 and 5 of Plot XXII north-



FIG. 152.—PLOT XXIV. PERIOD III TOWN WALL; ONE MAN AT OUTER POSTERN, ANOTHER BESIDE THE PAVED CONNECTION OF THE INNER AND OUTER ONES (FROM SOUTH)

ward into this plot. This pavement, .10-.15 thick, looked like part of a roadbed. It was removed later in order to uncover a room situated below it.

At a depth of 1.20 a fine, smooth pavement (No. 5) was uncovered which was made almost entirely of small bits of pottery set in a sort of concrete. On top of this pavement Wall 6, one layer high and .80 broad, extended east to west, bordering the pavement at its northern end. Wall 6 almost abutted Wall 7, which extended south to north, resting with its southern end on Pavement 5 but reaching at its northern end .40 below the level of the latter. At its highest

point it measured 1.30 and almost reached the surface. It consisted principally of two adjoining rows of stones, but again in places small stones were used as filling.

Between Wall 7 and the eastern wall of the plot extended Pavement 8, .40 below the surface and accordingly almost as much below the upper edge of

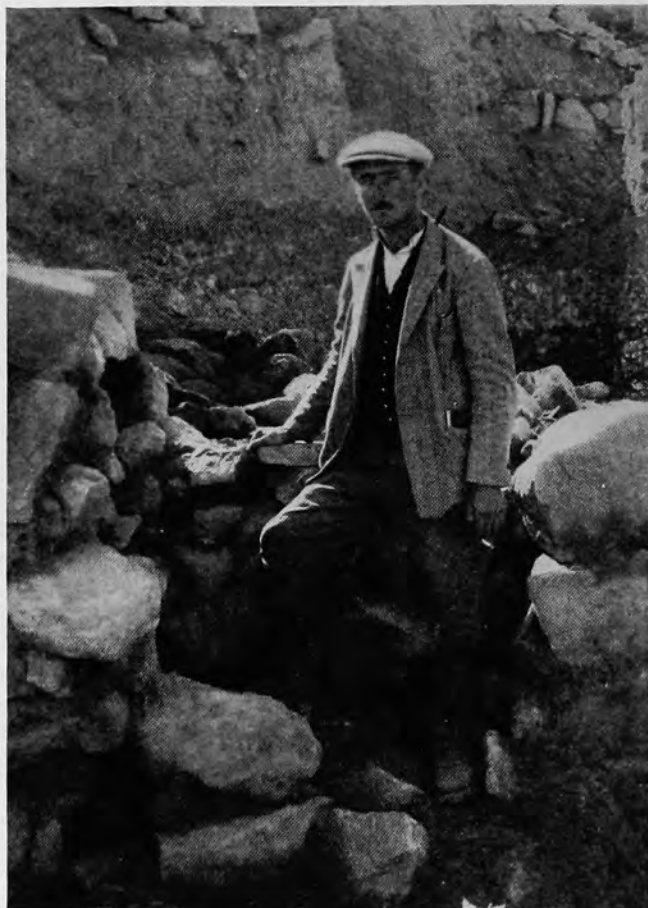


FIG. 153.—PLOT XXIV. THE INNER POSTERN FROM THE NORTH. MR. REIFENMÜLLER STANDS IN THE OPENING

Wall 7. Parts of it consisted of a cemented layer of grayish white, hard material relatively smooth on top. It may have been made of lime (white *kerpich* soil?), water, and rock particles. Two more pavements lay below the uppermost, as could be seen at a cross-section made by the deeper excavation. One pavement of flat slabs, again partly covered by cement, was .40 below it. The lowest one was .20 deeper. Below it piled stones, possibly a foundation of some kind, were

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visible to a depth of .40. Their base was on a level with the lowest row of Wall 7.

Walls 9 and 10 formed a corner north of this paved area. Wall 9 was one layer high and .70 from the surface. Only the western edge of Wall 10 was visible. Its one layer stood somewhat below the level of Wall 9.

The upper edge of Wall 11 was .40 from the surface. It was .60 high, composed of three to four layers of rather small stones. An opening .95 wide was



FIG. 154.—PLOT XXIV. THE OUTER POSTERN FROM OUTSIDE (NORTH)

probably a doorway, as indicated by the straight edges on both sides. A short wall fragment (No. 12) abutted the east end of Wall 11. A stone slab pavement (No. 13) extended from the east end of the doorway to Wall 14, which, with Walls 11 and 12, seems to have inclosed a room. An opening opposite that in Wall 11 was found in Wall 14 also, but on a level with the second layer from the top a series of flat slabs extended across the doorway on a foundation of the usual soil filling. Wall 14 was in parts .60 high, its upper edge being only .20 from the surface.



Pit 15, east of Pavement 13, was 1.20 wide at top, 1.60 at bottom, and 1.00 deep at an average. It need not have been made by the builders of the pavement and the before-mentioned walls, since it did not quite reach up to the pavement. It was an ordinary refuse hole, filled with ashes and sherds.

Wall 11 was set at its eastern end on top of the north half of Wall 11 *a*, which was .40 high. The latter was probably somewhat older than Wall 11, since it is hard to believe that the two walls formed part of one structure.



FIG. 155.—PLOT XXIV. THE INCLINED END OF THE OUTER TOWN WALL (FROM WEST)

A bath or baptistry (No. 16; Figs. 147-49) apparently belonging to the more ancient complex was situated north of Pavement 5, a former connection with which was indicated by a step (No. 5 *a*) leading from the pavement, which was here .20 above the rim of the bath, down to the level of the latter. The bath was made of stones set in and plastered over with white mortar made probably of *kerpich*, water, and small stones, the whole being .09-.11 thick. Its walls converged toward the bottom. Shaped like a square with rounded corners, its top was 1.70 wide, its bottom .90. Its rim was bent outward and rounded. In

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the center of the bottom there was a shallow circular depression .20 in diameter and .10 deep. The depth of the bath was 1.50. Two steps were built into its north wall, which here receded .35 at the top to admit them. The walls at sides and rear of the steps were only .02 thick.

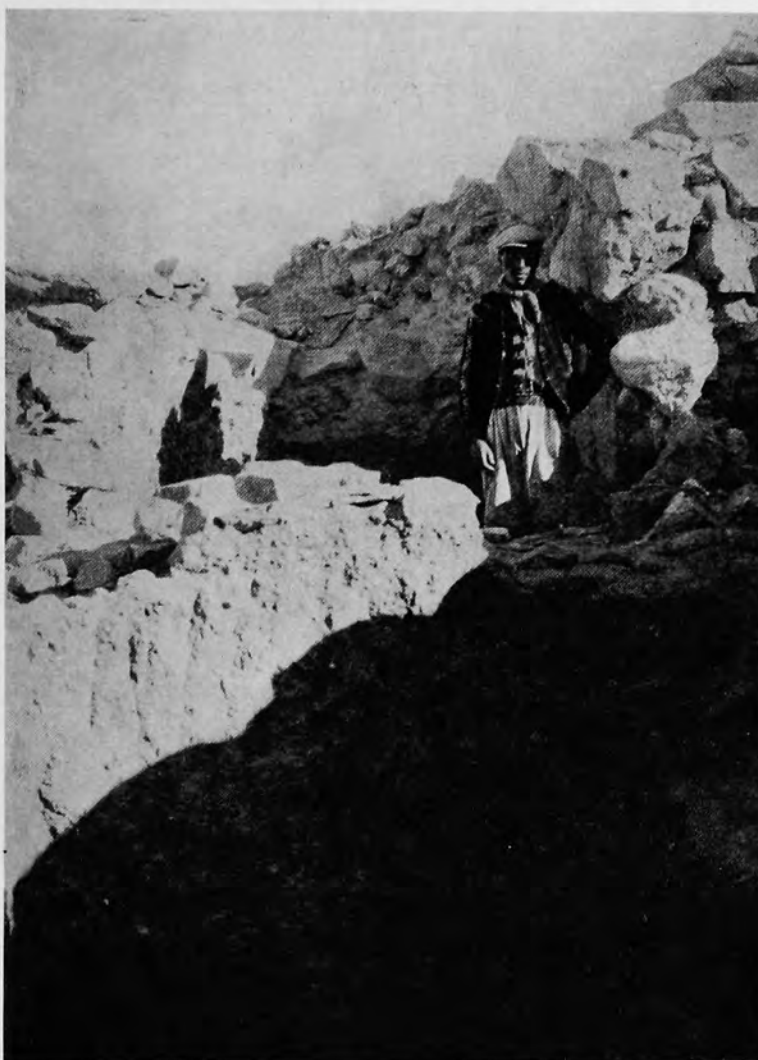


FIG. 156.—PLOT XXIV. SIDE VIEW OF THE PAVED PASSAGE CONNECTING THE POSTERNS: MAN BESIDE THE INNER POSTERN

Possibly representing part of the bath equipment, two large vessels (Nos. 17-18) stood over its northern and southern walls. The remains of No. 17, .90 high and .95 in diameter, stood somewhat to the west of the bath entrance and

.20 above its present broken edge. No. 18, cruder and more brittle than the other, stood .40 above the southern wall. It was 1.00 in diameter at its present height of .45. Its thickness was .035.

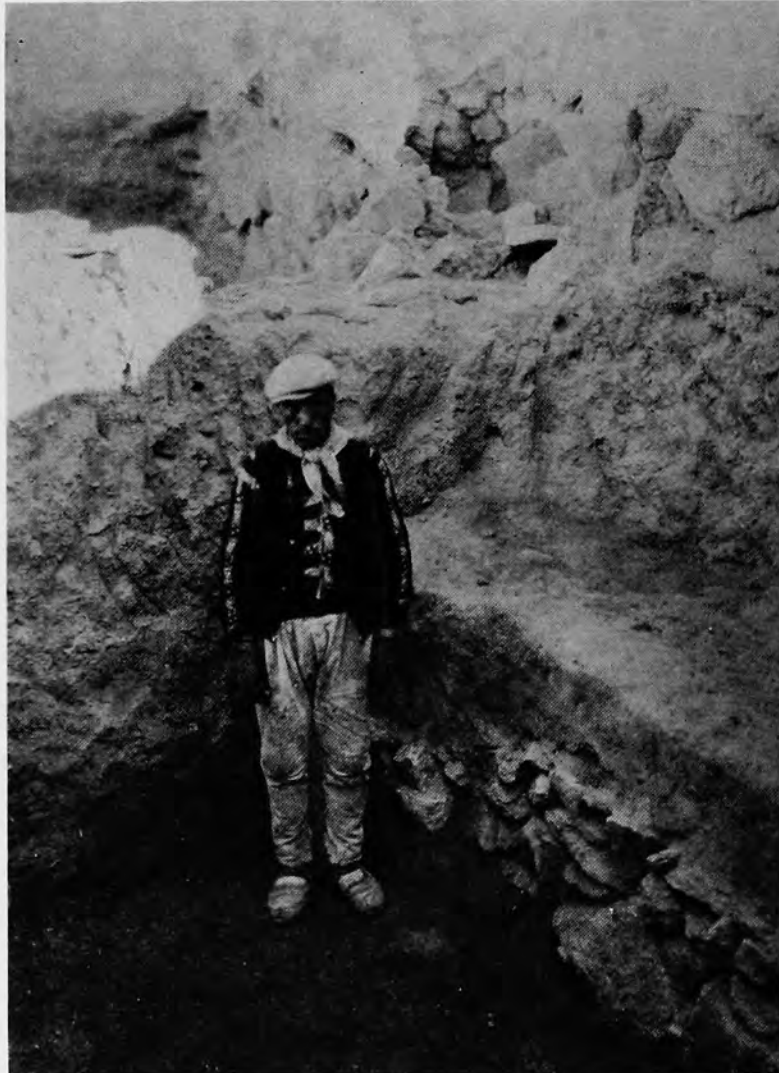


FIG. 157.—PLOT XXIV. MAN BESIDE PERIOD II KERPICH WALL ON WHICH THE PERIOD III TOWN WALL IS SUPERPOSED. BASE OF LATTER IS LEVEL WITH THE MAN'S HEAD

Leaning toward Wall 11 and on a level with its upper edge, the remains of another big vessel (No. 19) were found. The ashes it contained suggested that it was a fire pot. It was crude and brittle, with a flat bottom. Its remains were .20 high, .60 in diameter, and .04 thick.

Underlying this relatively recent complex represented by all the structures before mentioned except perhaps the bath, a series of more ancient room-divisions was found, inclosed by a number of exceedingly strong walls composed mainly of upright slabs. One room, lying under Pavement 4, was inclosed on the north and west by two such walls (Nos. 21 and 23). On the east, only a narrow rock pile indicated the course of the former wall. Walls 21 and 23 contained slabs .95 long, .60 high, and .50 broad. At most places two rows of them formed the wall; but there were also spots where smaller rocks were used as borders, the space between being filled with stones. In places the walls had a



FIG. 158.—PLOT XXIV. LATERAL VIEW OF PAVED PASSAGE CONNECTING POSTERNS. DIAGRAM (FROM WEST)

height of .65 above the hard-tramped soil of the floor. The upper edge of Wall 23 was .10 below the base of Wall 3 of Plot XXII and 1.30 below the surface.

A second room was inclosed by Wall 21, Wall 20, and a short wall fragment abutting the north end of the latter and continued by a narrow, one-stone wall (No. 22). Only the west wall was not uncovered. It was probably a continuation of Wall 23. Wall 20, 1.00 broad, was entirely composed of two rows of upright slabs, in places two layers being preserved. Some smaller stones were used as filling. At one spot this wall was .80 high. Wall 22 was only .30 in both breadth and height.

Wall 24 (Fig. 150), of the same type as Wall 20, extended east from the south end of the rock pile No. 20 *a*. It was .95 broad and had an exceedingly straight outer (southern) edge. Its slabs were as much as .85 long, .80 high, and .40 broad. Its northern edge was largely hidden below the south end of Pavement 5, which was built .20 above the top of this wall.

There is some doubt about the dating of these slab-walled rooms. On their level were found a few Roman sherds, but far less than in the stratum of soil on



top of them, together with some late Period III painted sherds of transitional varieties which sometimes occur even in the strata of the Roman fine wares. Since such transitional types were found below the floors also, the possibility that these slab-walled structures are much older than Roman times is excluded.

Plot XXIV (Map 22).—Directly below the surface lay a cupstone similar to that found in Plot IX. A number of relatively late structures corresponding



FIG. 159.—PLOT XXIV. THE TOWN WALL (FROM EAST) WITH LATER STRUCTURES AT HIGHER LEVELS

to those of Plot XXIII were found in this plot also. Wall 1 extended south-north, continuing Wall 12 of Plot XXIII. It was .65 broad, .60 high, and the upper edge of its two layers was .80 from the surface. It was composed of two parallel rows of stones with filling of small stones here and there. It was interesting to notice that at the north end of the wall relatively small stones represented the foundation layer, while rocks two or three times their size were on top.

A "niche" (No. 7) was found, the floor of which touched the present upper edge of Wall 1. The "niche" was a square open toward the west, .50 high, its

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sides .75 long and .15-.20 thick. Its walls were made of oblong slabs averaging .25 in length, plastered inside and out with a grayish white material like that previously encountered in floors, hearths, the bath of Plot XXIII, etc. A ledge extending across its northeast corner, .35 above the floor, was plastered on top and down its curved front after the manner of the walls. A fragment of masonry



FIG. 160.—PLOT XXIV. PASSAGE BETWEEN THE TWO POSTERNS, WITH MAN STANDING AT EAST SIDE OF IT

about a square meter in area was almost on top of the northeast corner of the "niche," with its upper edge directly below the surface.

Wall 2, oriented somewhat differently from Wall 14 of Plot XXIII, had only three layers, .50 high and .65 broad. It was of "border-stones and filling" type and reached the surface at its eastern end. Wall 3, running along the west edge of the plot, extended deeper than Wall 2 which abutted it. It was .95 high,

composed of six layers, its upper edge as well as those of Walls 2 and 4 being .10-.15 below the surface. Wall 4, similar to Wall 2, was two layers high and .90 broad. Between Wall 2 and Wall 14 of Plot XXIII a stone slab pavement (No. 5) was uncovered about equally distant from the upper edges of both walls, but .50 above the foot of Wall 14 and somewhat below the foot of Wall 2.

A hand mill of peculiar form, roughly semi-elliptical in cross-section, was lying on this pavement at the spot marked 5*a*, near the opening through Wall 14 of Plot XXIII. The face turned upward when found was rectangular, .40 × .30, and slightly convex, the curve following the long axis. It had been smoothed by grinding. A hole .05 long, rectangular but in the center becoming circular, was in the middle of the stone. A groove semicircular in cross-section

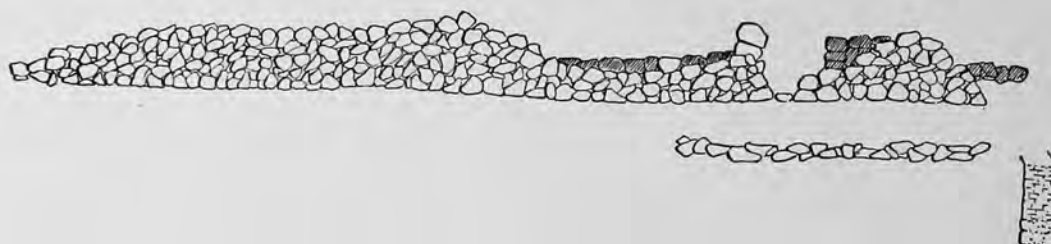


FIG. 161.—PLOT XXIV. DIAGRAM SHOWING RELATION OF PERIOD III TOWN WALL (FROM THE NORTH) TO A KERPIÇ WALL OF PERIOD II

extended from face to face straight across the middle of one long edge. The down-turned face, considerably more curved than the other, had in the center a large rectangular depression .18 long, .11 wide, and .09 deep. The short sides of the latter converged toward the middle, where it connected with the before-mentioned perforation. Two triangular grooves .10 long, .06 wide, and .02 deep connected the central depression with the long edges of the mill. One of these grooves in turn connected with the lateral groove already described. The long edges of the stone converged somewhat toward its ends. Across its center the stone was .29 broad, but at its ends only .27. Its thickness at center was .13.

There was one more fragment of late masonry, Wall 6, composed of a double row of big rocks. It was .85 broad and two layers high, its upper edge about on a level with that of Wall 9 of Plot XXIII, though it extended deeper than the latter. Its height was .65.

A more ancient complex was discovered at a considerably greater depth. At 1.90 below the base of Wall 1 and 1.40 below Niche 7, Wall 8 was found. Its continuation would extend directly underneath these structures and those situ-

ated west of them. Wall 8 was composed of big boulders. Its northern face was well set and straight. Its southern side was disturbed, as will be described later. The breadth of the wall, when found, was .75 in its western part; but it certainly was once broader. South of its eastern part especially an extensive rock pile (No. 8 *a*) was found, seemingly the remains of upper wall-layers. A gateway 1.15 wide separated the two parts. Into this gateway, perhaps at a



FIG. 162.—PLOT XXIV. ROMAN REFUSE PIT BESIDE THE PRESENT TOP OF PERIOD III TOWN WALL

later time, had been built a wall (No. 8 *b*) of small stones, so that it looked like a recess in the main wall. The eastern and western parts of Wall 8 were differently oriented. There was a jog between them also, for the west end of the eastern part protruded farther at the gateway than did the east end of the western part. While the average height of the western wall-section was 1.00, east of the gateway the wall was 2.00 high and 1.20 broad where it had not crumbled off.

The gateway was paved with flat stone slabs. Along its eastern edge was found a drain consisting simply of slabs placed upright. The pavement at each



side was lowered for a breadth of .20. One may assume, therefore, that there was a drain on the west side also.

From the gateway a paved road (No. 9) 1.40 broad led to a corresponding opening, 1.15 wide at top but converging to .40 at bottom, in Wall 10. This wall, together with Wall 8 and the paved connection, formed part of a powerful fortification, the town wall of a Period III settlement (Figs. 151-61). The rocks of Wall 10 were still larger than those of Wall 8 which paralleled it. The breadth of the western section of Wall 10 was 1.50-1.80, that of its eastern part, 2.00. Its faces were made of cyclopean boulders, the space between being filled with rocks of all sizes. The stones in the outer (north) face were smaller than those turned townward. The highest points of Walls 8 and 10 were at the edges of the two gateways—together representing a postern—with the exception of one spot in the western part of Wall 10.

The inner wall of the fortification was continued east and west, the outer wall toward the east only. It broke off 3.30 west of the postern. It was not destroyed at this place, nor had it crumbled off. That the break was voluntary, made by the builders, was indicated by the construction of the end. It was not irregular, not even straight, but was inclined at an angle of about 60°, the bias plane built of rather smooth boulders. At this place the wall was 1.70 broad and 1.10 high.

One more point, concerning the composition of the soil in this plot, must be mentioned. At a depth of about 1.00, and running deeper toward the west, soil was struck which in every respect was identical with that of the original surface encountered at several spots where the excavations were carried deep enough. It was a yellowish dirt containing a great number of white lumps of limestone, large and small. This layer was absolutely sterile, as no sherds or other artifacts occurred. We were disappointed to find "natural ground" at the edge of the mound terrace 1.00 below the surface, where we expected the thickness of the culture deposit to be 6-8 meters. However, in the northern part of the plot the ground was of the usual "*hüyük* color," grayish black, speckled with particles of ashes and charcoal, and containing the usual amount of sherds and other objects. It was here that we struck the fortification walls. The same situation was later encountered to the north, i.e., outside the walls in Plot XXV. Here, however, we dug deeper and found black refuse soil underneath the sterile layer! The foreign stratum was deepest at the east end of the plot, where it measured 1.40 in depth.

After this experience it was clear that the original soil was an artificial deposit carried here from outside the *hüyük* territory. As to its purpose and age, our only certainty is that Walls 8 and 10 and the paved road were built before it was brought here. It must have been piled up outside (north) of Wall 10 and inside (south) of Wall 8 against those walls, as indicated by the sharp line between the yellowish white deposit and the black soil which covered the walls and filled the passage between them. The artificial cross-section made by



FIG. 163.—PLOT XXX. CLEANING OPEN PASSAGE RUNNING DIAGONALLY ACROSS THE TOWN WALL

the excavation on the east wall of Plot XXIV showed a straight upper surface of the sterile stratum about 3.00 long and somewhat above the level of the rock pile No. 8 *a*. It ascended with even slope to a height of 1.00 above this rock pile and broke off with two steps 1.75 inside (south) of the northern edge of Wall 8, i.e., approximately at the spot where the inner edge of this wall would be expected.

The whole deposit here had the appearance of an embankment built up behind or inside the fortification wall. The defenders could have stood on its top,

using the rock wall, which of course extended higher up, as a parapet. In this case the rock pile No. 8 *a* would have been a foundation for the embankment, since the sterile deposit extended on top of it and in between the individual rocks. However, there is an objection to this assumption. The deposit outside (north) of Wall 10 sloped from the foot of the wall west of the entrance upward toward the east with distinct stratification and reached the east end of the plot at the very surface, considerably above the present wall edge. In the adjoining plot (No. XXX) the bottom of the deposit was .90 above the foot of the wall. One can hardly assume that the builders of the wall made in front of it an embankment with a gentle slope, although of course the foundation of the wall may have been sunk .90 into the ground. If so, was the outer embankment piled up by besieging enemies?

The most plausible explanation is that the original soil, at least that found outside the town wall, was carried here for roofing material and for plastering by people who came after the period during which the wall was built. This must have happened prior to, or possibly during, the beginning of the Roman period, as indicated by a pit (No. 11) which was dug through the sterile deposit, even ruining the southern edge of Wall 8 at this spot. That this refuse pit (Figs. 151 and 162) was made during the Roman period is proven by its contents. Not even on top of Mound A, which up to the present had yielded the greatest number of Roman objects, had such a quantity of Roman pottery been found at one spot as in this pit beside a pre-Roman wall! Numerous sherds and broken vessels of Arezzo-like ware, *terra sigillata*, and fine red and brown wares were found in this pit, which measured 1.90 in diameter at top, 1.70 at bottom, and about .80 in depth.

PLOT XXX (MAP 22).—This plot was excavated in order to follow the town inclosure found in Plot XXIV. The situation proved to be very interesting. The continuations of Walls 8 and 10 of Plot XXIV were crossed diagonally by a long passage (No. 1) inclosed by stone walls (Figs. 163–64). The passage was 1.40 wide at the south end of the plot, but its walls converged toward the northeast until, at a width of .70, it became a tunnel (Fig. 165) covered with large stone slabs (No. 2), the first one measuring 1.25 in length, .40 in breadth, and .25 in thickness.

The northwest wall (No. 3) of the passage was .90 broad. Its inner face was rather well set and straight; its outer, somewhat irregular. The wall stones were mostly smaller than those of the town walls, but some foundation rocks were of

considerable size. The passage may not have been as long as it appears on the map. The southwest end of Wall 3 did not reach even to the present upper edge of Wall 9 in Plot XXIV. It was built for a length of 2.90 on a foundation of ordinary refuse. This piece of the wall may have been added later. In its central part, Wall 3 was 1.15 high. Shortly before the entrance to the covered passage, its height was 1.00.

The average height of Wall 4, built like Wall 3, was 2.00. It was 1.00 broad and had an offset, the upper layers receding somewhat. At its northeast end it broadened to 2.00 and separated into two branches. One branch, 1.50 broad, turned more eastward, while the other branch kept its original direction and

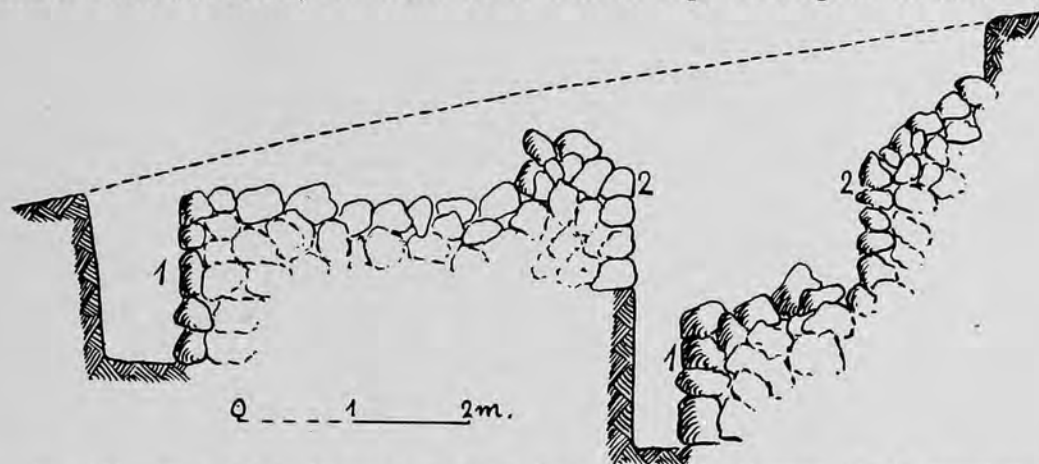


FIG. 164.—PLOT XXX. DIAGRAM OF OPEN PASSAGE. WALLS MARKED "1" CONSTITUTE THE TOWN WALL; THOSE MARKED "2" ARE THE WALLS OF THE PASSAGE

became the southeast wall of the tunnel, the top of which was .70 below the upper edge of the broad branch of the wall.

The open passage was almost wholly filled with rocks which had probably tumbled down from the inclosing walls. At a distance of 1.40 southwest of the angle formed by Wall 3 when turning toward the covered passage, a stone door-socket (No. 5) was found 1.40 below the wall edge. It was of irregular rectangular shape, .26 long, .17 broad, and .15 thick. The socket was .07 in diameter and .03 deep. The tunnel could be followed for only 1.40. Here fallen rocks arrested further progress from the inside. Its height was 1.60 at the entrance (Figs. 165-66), lessening to 1.00 farther inside. It was .70 wide at top and 1.25 at bottom. The third ceiling slab from the entrance had on its lower side a depression indicating that it had once been used as a door-socket. The further course of the tunnel is described under Plot XXXI.



There can be little doubt that Walls 3 and 4 and the tunnel were built later than the town walls; for they were set right on top of the latter, as was found when the excavation in the open passage was carried below the base of its inclosing walls. Only the continuation of Wall 8 of Plot XXIV appeared, crossing beneath the passage. The southern edge of Wall 10 of Plot XXIV was hidden below Wall 3, while the northern face was free, following the original direction.



FIG. 165.—PLOT XXX. OPEN PASSAGE WITH TUNNEL IN BACKGROUND

PLOT XXXI (MAP 22).—In this plot the whole complex of walls described in Plot XXX was continued in an almost solid mass of rocks (Fig. 167). At only one spot (No. 1) could the inner edge of one of these walls—the outer town wall—be determined at the time, and then for only about 1.00. The outer edge of what seemed to be the continuation of Wall 4 of Plot XXX was also deter-

mined, together with part of the outer edge of the outer town wall (No. 2); but for the rest only a row of big slabs (No. 3) was conspicuous. They were found in line with those slabs which ceiled the tunnel. They may represent a continuation of the latter or possibly the border-stones of the outer town wall, which in this case would be overhanging. The situation here can be cleared up only by further excavation of the area east and north of this plot.

PLOT XXV (MAP 22).—With the exception of two pits (Nos 2 and 3) and a small stone-paved area (No. 1), no recent—i.e., classical or later—structures

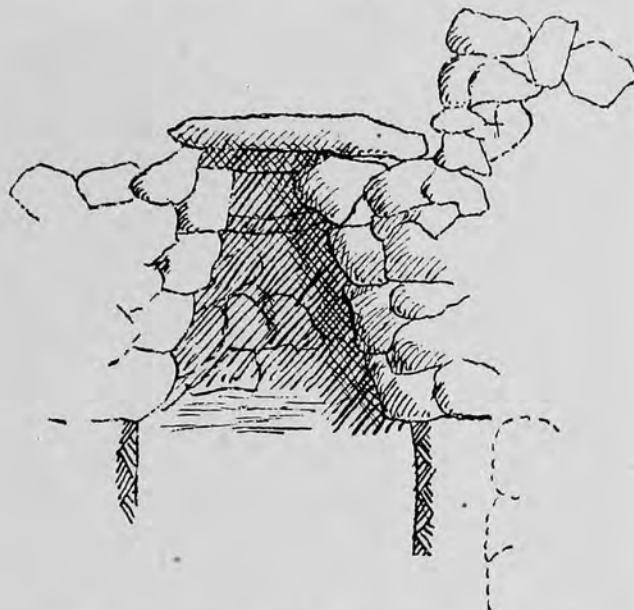


FIG. 166.—PLOT XXX. DIAGRAM OF THE TUNNEL ENTRANCE

existed within this plot. Pavement 1 was .40 below the base of Wall 4 of Plot XXIV, reaching at its southern end to the sloping surface of the mound. Pit 2, a simple refuse hole containing characterless sherds, was dug through an underlying *kerpich* wall. Pit 3 contained much Roman pottery. This refuse hole again had been excavated partly in the whitish yellow soil in the same way as Pit 11 of Plot XXIV. It was 1.00 wide and 1.20 deep, its upper edge being somewhat below that of the outer town wall.

A big, complete pot (No. 4) standing at a depth of 1.90 measured 1.00 in height, .57 at its greatest diameter, and .48 at the orifice. It also belonged to a more recent occupation than the structures later to be mentioned. The pot

(Fig. 168) had two ring-ornaments in relief, at places where handles would be expected. It was filled with ashes and sherds in the same way as the refuse pits. It contained no Roman sherds but a fragmentary red-washed pitcher with four handles, two vertical and two horizontal.

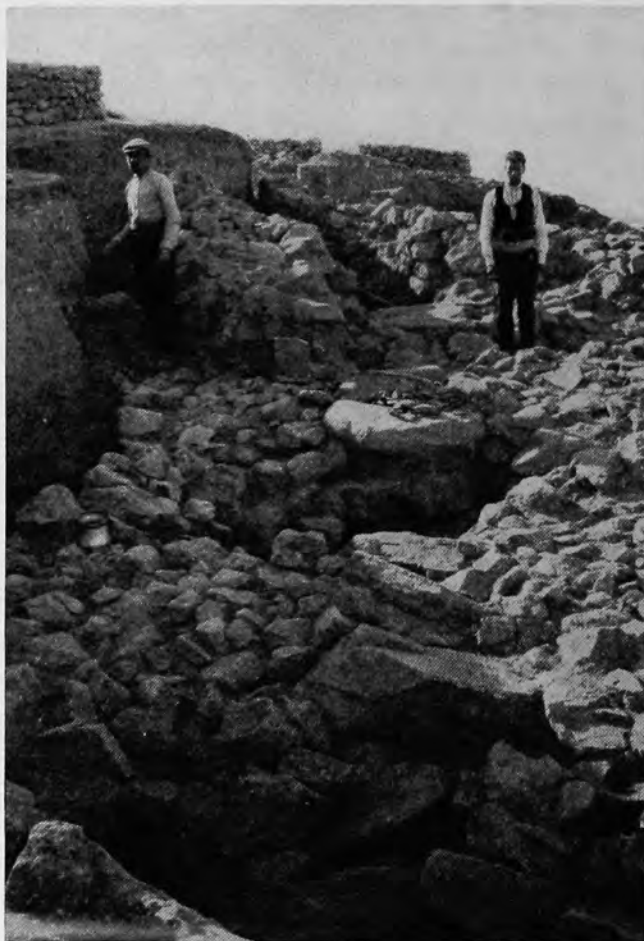


FIG. 167.—PLOT XXXI. CONTINUATION OF THE  
BROKEN-DOWN TUNNEL AND REMAINS OF THE TOWN  
WALL

The pits, the big vessel, and the town wall were all found on the very top of structures which belonged to a time much more remote—our Period II. The decorated pottery and the fine wares disappeared as we dug deeper. The edges of *kerpich* walls appeared, and an interesting group of structures was uncovered (Fig. 169) which contained principally our yellowish brown and gray wares, also red-slipped sherds. Pointed bottoms, high rounded and high triangular handles turned up, also bill-spouts with the usual offsets on the underside.

The complex thus defined consisted of the rooms inclosed by Walls 5-8, 8 *a*, and 9-15, together with Wall 12 of Plot XXIV. Pits 17 and 19, a circular plastered spot (No. 18), and possibly Pit 16, belonged to the same period. The situation resembled very much that of Plot II, where structures of similar nature and belonging to the same period were found on the slope of the *hüyük*. In Plot XXV, however, the rooms were long and narrow, suggesting storerooms rather than living-rooms. The distance from the surface changed according to the slope. Wall 5 reached to the very surface, while the upper edge of Wall 10



FIG. 168.—PLOT XXV. A REFUSE PIT AND A STORAGE VESSEL APPEARING

was 3.20 deep at its northern end and 1.00 below the foot of the later town wall No. 10 of Plot XXIV.

The plan indicates clearly that the main structure of this complex was represented by Walls 9, 10, and 13 of this plot and Wall 12 of Plot XXIV. These walls inclosed a big rectangular area subdivided into at least three narrow rooms. It is probable that there were four, considering the area covered by the outer defense wall (No. 10 of Plot XXIV). North of this extensive structure, four chambers still narrower and smaller than the subdivisions of the former were uncovered. They were inclosed by Walls 9, 8, 8 *a*, 5, 6, and 7. In one of



these divisions Pit 17 was found 2.00 below the surface and extending .60 downward from the foot of Wall 8 *a*. Similar chambers, formed in part by Walls 11 and 12, existed west of Wall 10 of the big inclosure. Lying on top of the northern section of Wall 12, a circular patch of plaster was found. Similar spots uncovered in other plots had apparently been used as hearths, since often several layers of such plaster were found, with ashes, charcoal, and sherds occurring between them.

All the walls of this structural complex were made of *kerpich* resting on stone foundations. There was usually one foundation; but the walls of the big inclosure had two layers of stone and two of *kerpich*, the whole being plastered on both sides with a grayish black coating averaging .05 in thickness. Wall 9 may serve as an example. The height of the lowest stone foundation was .35, that of the *kerpich* layer resting on it, .65. The second stone foundation was .65 high; the upper *kerpich* layer, .60. The breadth of the latter was .55. The lower *kerpich* layer was broader, since it had been pressed out by the weight resting on it.

Successive occupancies of this inclosure were suggested by the stratification visible on the soil section exposed below Wall 10. One floor was level with the base of Wall 10, and a hearth was situated even below this level. A second floor was level with the upper edge of the lower stone foundation, and a third floor was level with the upper stone foundation. This may indicate that the upper stone foundation and the *kerpich* wall resting on it had been added later. Or a two-story building with very low first story, for storage perhaps, may have existed here, since the contents of the structure, principally the pottery, gave no hint of two periods of occupation. Even on the first assumption, the difference in time between the building of the lower and upper parts was probably slight.

Wall fragment No. 15 deserves special consideration. This wall was built of *kerpich* but seemingly not of bricks. Its color when uncovered was grayish brown speckled with white, but no brick-marks could be found. Had it not been for a light gray coating on both sides, it would have been difficult to discover the wall at all. It was possibly constructed between two frames into which the building material was poured. The foot of this wall was level with the upper edge of the lower stone foundation of Wall 10.

Within the main structure and close to Wall 13, Pit 19 was found. Its edge was on a level with the base of Wall 13 and 2.90 below the foot of the town wall. It contained masses of sherds and also fragmentary pots, all of our Period II (type ware: yellowish brown, grainy).

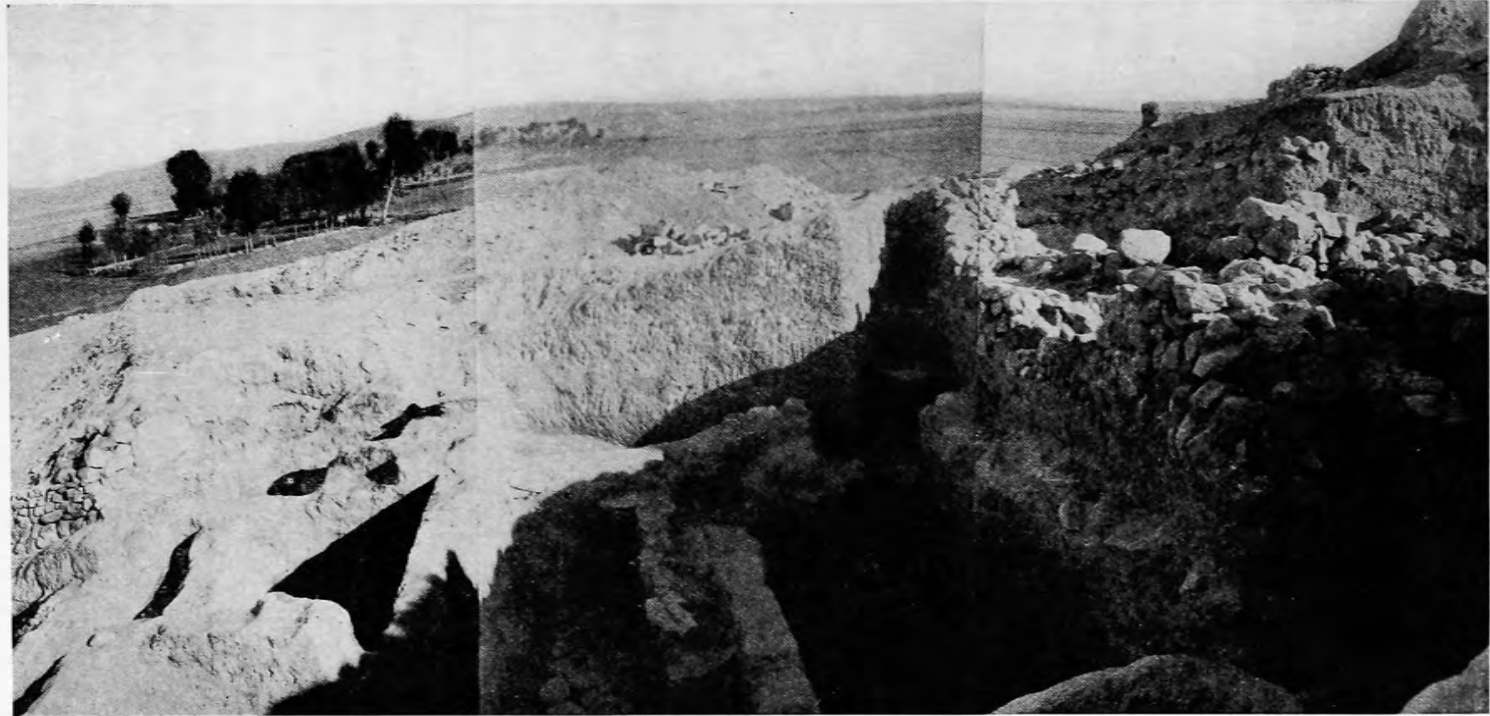


FIG. 169.—PLOT XXV. PERIOD II STRUCTURES UNDERLYING THE PERIOD III TOWN WALL

At the bottom of the northernmost division of the inclosure, a number of flat slabs, probably a pavement (No. 20), were found at a level somewhat below the foot of Wall 9.

Cist 16, found in the corner formed by Walls 9 and 10, contained the skeletons of three children ( $X_{2-4}$ ). Skeleton  $X_1$  had been found directly below the surface. Cist 16 was not built prior to the second occupancy (if such occurred) of the big inclosure.

PLOT XXVI (MAP 22 AND FIG. 170).—Wall 5 of Plot XXV reached part way into this plot. With this exception, no structure of importance appeared here. A stone wall (No. 1) one layer deep (or was it part of a pavement?), with



FIG. 170.—PLOT XXVI. START OF WORK; NORTHEAST END OF THE HÜYÜK

a straight edge on its southern side, extended across the northern end of the plot at .50–.80 below the surface. At the west edge of the plot appeared a few rocks which may possibly represent the end of a wall.

Many sherds and other specimens of those types made by the builders of the lower structures of Plot XXV were found in this excavation also. It was carried to a depth of 4.00 at the north end (up the slope). The original surface was there struck at a depth of 3.80.

PLOT XXVII (MAP 22).—The only structure found here was a one-stone wall, one layer high and in parts almost touching the surface. Plot XXVII was the last plot excavated near the foot of the *hüyük* slope. The soil was of much lighter color than that encountered in most of the other plots. Only a few sherds were found. The original surface was struck at the south end at a depth of 2.10.

## VII

## THE FORTIFICATIONS

THE MAIN *KERPICH* WALL

The two most important architectural remains brought to light in 1927 are parts of the fortification of the main mound (A on Map 3, p. 45). Both are situated on the main elevation of the *hüyük*, and it is not impossible that these two large wall remains belong to the same period. The main elevation of the *hüyük* consists of a large conical mound with a flattened summit and a spur toward the west which forms a part of the western slope of the *hüyük* itself. This western slope shows three symmetrical bulges (Mounds B, C, and D on Map 3). One is tempted from the beginning to see in the highest elevation the citadel itself and in the lower westward extension the lower fortress. The so-called "main *kerpich* wall" was the first of the two fortification walls to be found. In fact, it became for the first weeks of our excavations the thread which we followed upward toward the top of Mound A, till it ended abruptly under a chaos of constructions of a seemingly later period.

The wall, as far as unearthed by us, extends through nine of our plots in an easterly direction up the slope of Mound B toward Mound A (Fig. 171). The part unearthed so far (Fig. 172) starts nearly at the end of the west slope of Mound B. Its end was so badly preserved that the downward continuation could not be followed. After 14 meters comes a tower (Fig. 173; *a* on plan) about  $4.00 \times 5.00$ , protruding 1.40 from the wall front. Then follows a second section of wall, 10.20 long, bent a little more northward (Fig. 174). After an outward jog of .40 there follows a third section, 8.10 long, again followed by a tower (*b*), which in this case protrudes 1.00 from the wall front and is about  $4.50 \times 5.00$ . Slightly more inclined toward the north follows a piece of wall 12.30 long (Fig. 175), which abuts on a more eastwardly oriented piece (*c*) protruding 1.40 from the general wall front. Extending in the same direction as this protruding piece, a section 2.80 long (*d*) forms the end of the wall as far as unearthed by us (Fig. 176).

Exact measurement of the towers and of the thickness of the wall is at present impossible, as the *kerpich* of which the wall was constructed has suffered





FIG. 171.—MAIN KERPICH WALL, SEEN FROM TOP OF MOUND A. TOWER *b* IN CENTER

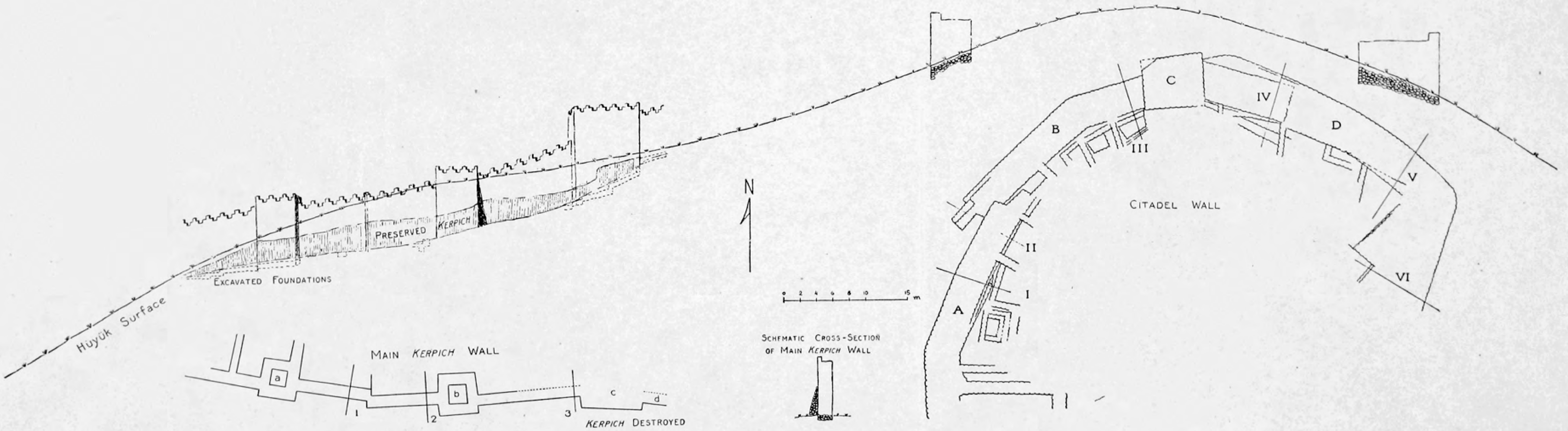


FIG. 172.—GENERAL PLAN OF THE FORTIFICATIONS FOUND ON THE MAIN ELEVATION





## THE FORTIFICATIONS

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from decay and has therefore lost its exact outlines. Only after the stone foundations on both sides have been at least partly unearthed can accurate measurements be given. Those taken this year vary between 1.50 and 1.25 for the thickness of the wall.

The wall itself is constructed on a stone foundation two to three rows of stones thick, amounting mostly to about .50. Steplike, this ascends the slope,



FIG. 173.—MAIN KERPICH WALL. TOWER *a*

passing finally above the general level of the preserved *kerpich* constructions. The *kerpich* is preserved on the various parts to various heights. At both "ends" it is the worst preserved. At the west end it is unrecognizably lost, and even the stone foundation disappears; at the easternmost point, only the abruptly ending stone foundation is preserved. Theories as to its continuations must depend on further excavations, which should reveal the situation at least eastward toward the top of the mound.

Along the outer face of the wall the excavations have gone deeper, and in several places the foundations have been cleared. An extraordinary fact was



observed during the work. Although the *kerpich* itself was rather hard to recognize and to follow, the general direction of the wall was shown by piles of broken rocks (Fig. 177) along its outer, but not its inner, face. These rock piles form a rather difficult problem. Figures 178-80 show cross-sections of the spots where the foundations were cleared. On first thought, the rocks would seem to have been a revetment; but no sign of actual construction has yet been recognized, and furthermore in two places there appear two rock piles superposed at



FIG. 174.—MAIN KERPICH WALL NEAR SPOT SHOWN IN CROSS-SECTION NO. 1

different levels. In spite of such appearances, it is most probable that against the outer face of the wall, at least to a certain height, stones had been packed to protect the easily decaying *kerpich* against atmospheric influences as well as to make the wall more resistant against hostile battering-rams. The two cases of apparent superposing of rock piles cannot yet be explained.

As to the towers, the best preserved is the second one, within Plot 12. The thickness of its walls is 1.25. Its interior is nearly square,  $2.25 \times 2.35$ . On the inner side is a recess .25 deep, 1.20 above the "floor," which consists of *kerpich* débris and stones, and 1.30 below the present top of the *kerpich*. A little higher

than the bottom of this recess there are on opposite walls holes which probably contained wooden supports for the floor of a second story. In the interior of the tower itself the *kerpich* bricks are best preserved. The wall seems to have been constructed by alternating rows of lighter and darker *kerpich*. The faces of the bricks are  $.40 \times .09$ . Their width can be measured only approximately.

Association of this wall with buildings or parts of buildings inside the wall within the excavated area has so far been impossible, since most of the struc-



FIG. 175.—MAIN KERPICH WALL BETWEEN TOWER *b* AND CROSS-SECTION No. 3

tures yet unearthed seem to be of a more recent period. The foundation of the wall on the inside has not yet been reached. In prolongation of a side wall of each tower, and at the jog, *kerpich* walls running almost exactly south-north seem to be connected with the main wall.

#### THE CITADEL WALL

The stone citadel wall, now unearthed halfway around Mound A (Fig. 181; cf. Fig. 172), seems to have girdled its top. The striking fact that various large sections partly overlap suggests that at least a few such sections are later ad-

ditions. This wall was unearthed first during our search for a continuation of the main *kerpich* wall. It appeared as the outer face of a wall well built of larger and smaller stones and preserved to a height of 1.80. The progressing excavation showed that we had struck the largest wall so far known at our site. Sloping upward at an angle corresponding to the surface of the *hüyük*, the wall proved to have a thickness of 4.50.



FIG. 176.—MAIN KERPICH WALL. PARTS *c* AND *d*

Unit A of the wall (cf. Fig. 172) was then completely unearthed to the northward, where its end overlaps the second section. Its southern end is still covered by the culture deposits of later periods. Its outer face, preserved to varying heights, is 26.80 long. After the first 7 meters comes a rounded bend (Fig. 182). At its northern end it jogs inward 1.70 at a slightly obtuse angle, then continues 3.80 again in approximately its old direction. A second, similar jog of about 1 meter follows. Then a final strip 3.80 long continues in the main direction, but is partly covered by unexcavated territory. On this account it is not yet clear whether a cross-wall .95 thick which projects 3.50 and overlaps the second unit of the wall belongs to the first unit.

## THE FORTIFICATIONS

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Far more complicated is the inner face of Unit A. Near the end of the excavation toward the south, two parallel walls run back at an angle of  $90^\circ$  toward the center of Mound A. The southernmost wall is 1.50 wide. After 11 meters it bends approximately  $90^\circ$  southward, quickly to vanish under ruins of later



FIG. 177.—MAIN KERPICH WALL AT POINT SHOWN IN CROSS-SECTION NO. 1. STONE REVETMENT, REMOVED HERE, SHOWS AT EACH SIDE

stone structures. Its present height is from .60 to 2.40. The second, parallel wall, 1.20 farther north, is .80 wide; its preserved length is 4.00. Next comes an area which has not been dug very deep, since a little below the wall top appeared a hard-tramped floor inclosing the walls of a rectangular room apparently connected with this fortification. The upper part of the wall beyond this point shows a number of ledges varying in direction; a room containing two



fire pots and situated close to the wall seems to be associated with it (see cross-section No. I, Fig. 183). After being overlapped by a cross-wall, the relationship of which to it is problematical, another stretch with ledges follows, again overlapped by a narrow wall which disappears beneath the unexcavated area (cross-section No. II, Figs. 184–85). The northern end of Unit A overlaps Unit B.

The actual outer face of Unit B is about 3.50 farther outward. Its southern end is clear structurally, but its meaning is uncertain. We at first expected here a gateway, but so far nothing has been found to warrant such a theory. The outer face shows three ledges, and the narrow tip forms with Unit A a sort of

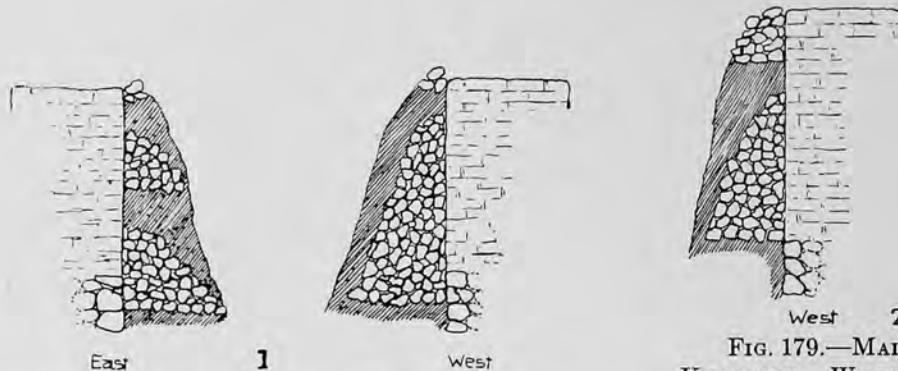


FIG. 178.—MAIN KERPICH WALL. CROSS-SECTION No. 1. SCALE, 1:100

FIG. 179.—MAIN KERPICH WALL. CROSS-SECTION No. 2. SCALE, 1:100

passageway interrupted by a corner of the latter. The outer face of Unit B, preserved to a height of .60–1.20 runs first 18.50 in a northeasterly direction, then bends eastward. After 9.70 it is overlapped by a large, nearly square construction which forms Unit C.

The inner face of Unit B shows no ledges. It is overlapped after 7.40 by an apparently later wall fragment still partly hidden in the unexcavated area.<sup>1</sup> For 10 meters the wall continues in the same direction, once more overlapped by a narrow wall fragment; then it turns eastward, running parallel to its outer face. The height varies between 1.10 and 1.60. Behind this last part of Unit B there have been unearthed a number of wall fragments belonging to structures partly perhaps of the same period as the wall (cross-section No. III, Fig. 186).

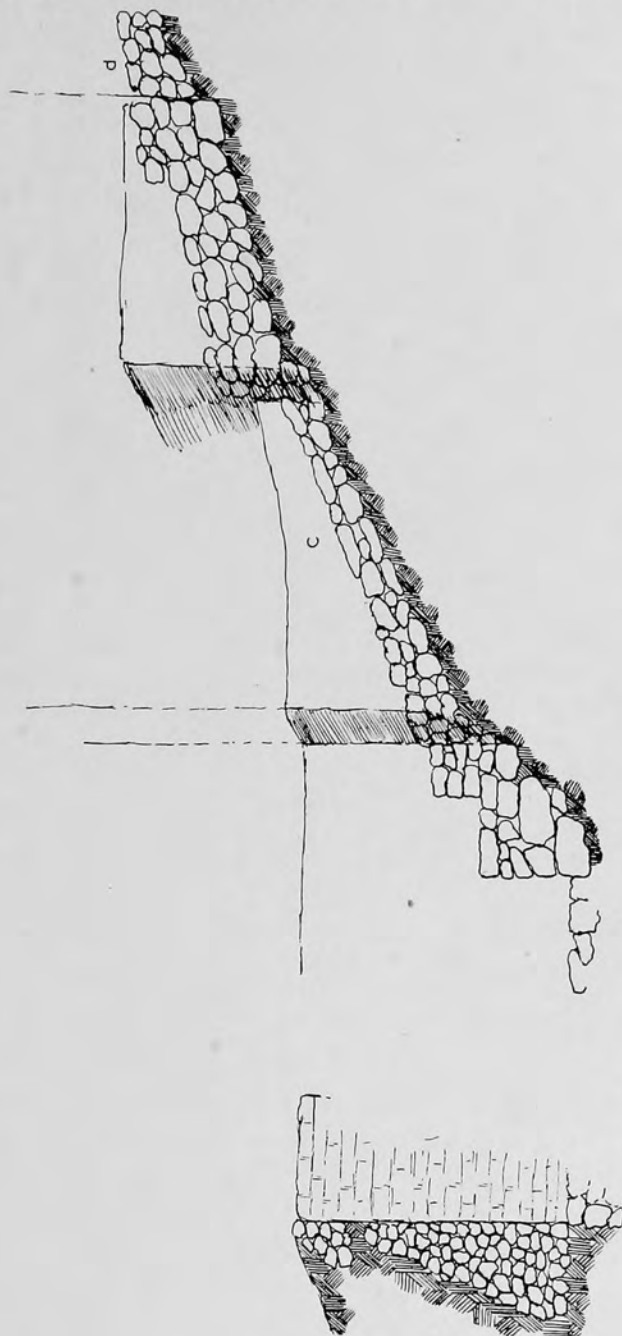
Unit C consists simply of a large, nearly square block oriented slightly more eastward (Fig. 187). Its northwest corner has fallen down. The connection of

<sup>1</sup> Compare the similar walls overlapping Unit A.

## THE FORTIFICATIONS

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this unit with wall remains inside is not yet clear. As already stated, this unit seems to have been superposed on the original wall, for the latter continues as Unit D east of this block in approximately the direction of Unit B.



3

FIG. 180.—MAIN KERPICH WALL. CROSS-SECTION No. 3 AND ELEVATION OF PARTS *c* AND *d*. SCALE, 1:100



FIG. 181.—MOUND A FROM NORTH-NORTHEAST



FIG. 182.—THE CITADEL WALL. BEND IN UNIT A

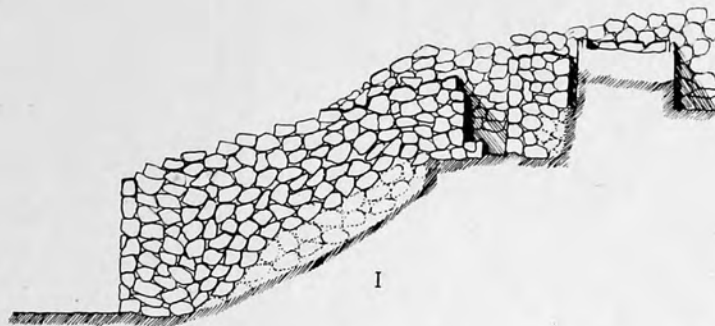


FIG. 183.—THE CITADEL WALL. CROSS-SECTION NO. I. SCALE, 1:100



THE ALISHAR HÜYÜK

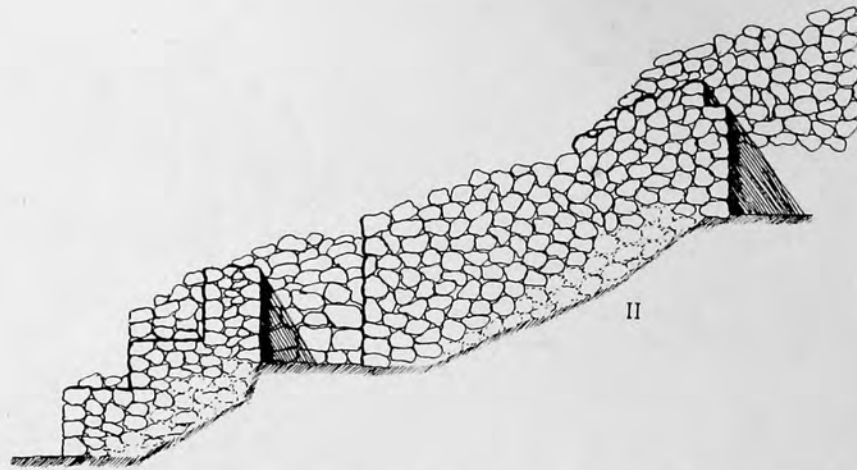
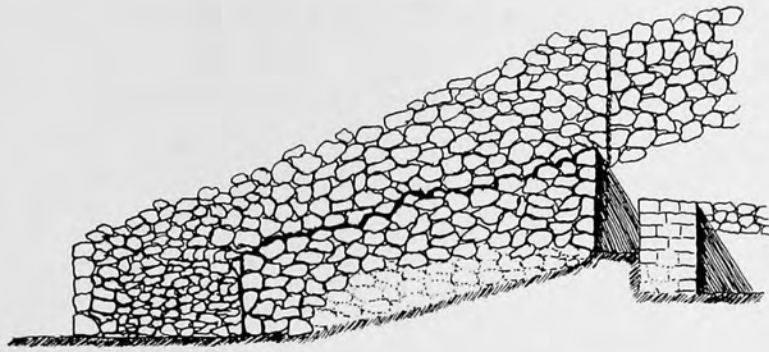


FIG. 184.—THE CITADEL WALL. CROSS-SECTION NO. II. SCALE, 1:100



FIG. 185.—THE CITADEL WALL. UNITS A AND B NEAR CROSS-SECTION NO. II



III

FIG. 186.—THE CITADEL WALL. CROSS-SECTION NO. III. SCALE, 1:100



FIG. 187.—THE CITADEL WALL. UNIT C

Unit D is at its beginning again very complicated both outside and inside (Fig. 188). The outer face, after continuing for 6 meters in the general direction of the last part of Unit B, curves gradually to the southeast for 28.50 meters. It then bends to west of south, ending after 9 meters in unexcavated soil. Near the beginning of the outer face three ledges with varied orientations are to be seen on the top of the wall itself; one of them runs parallel with the inner line of the wall. Doubtless this fourth unit is in reality composed of various sections; but they are very difficult to distinguish. The part at the last bend must surely be considered an individual element. In contrast to the rest of the wall, it consists of very small stones; only its outer and inner faces were constructed with larger ones.

Very complicated is the inner face of Unit D (Fig. 189). Right at its beginning there is a ledge 1.20 wide and 1.05–1.25 below the top of the wall. But on this broad step another wall has been erected in a diagonal direction. Then follows another offset (cross-section No. IV, Fig. 190). A wall .80 wide abuts here, largely buried in the unexcavated area but clearly standing at a higher level and so probably belonging to a more recent period. A little beyond, a rectangular room adjoins the citadel wall on the same level with it. Then seems to follow a more recent part; for on the wall itself can be seen a fragment of wall face, and in line with it, inside of the citadel wall, is a second piece, above which comes a wall face with a different direction (cross-section No. V, Fig. 191). A very well preserved wall abuts here at an acute angle 5.40 before the sharp southerly bend. Between this wall and the citadel wall part of a pavement was found; on it lay a large rectangular stone block (Fig. 192). Part of a rectangular "room" with a ledge .60 wide was the last portion unearthed in 1927 (cross-section No. VI, Fig. 193). Near this place the citadel wall shows a width of 8.00 (Fig. 194). Further clearance and investigation may explain this unusual thickness, for it is very unlikely that this was the original form.

As to the dating of these two walls in our local periods, they both seem to belong to our Period III. Since characteristic pottery of that period, decorated with concentric rings, stags, and conventionalized trees, has been found associated with the well-known type of disk-shaped stone seals or amulets with "Hittite" hieroglyphs, it seems obvious that we have here a fortress of the people who used this system of writing. To find out whether they were real Hittites, related to the Hittites whose state archives were found at Boghaz Köi, is one of the main aims of our excavation.

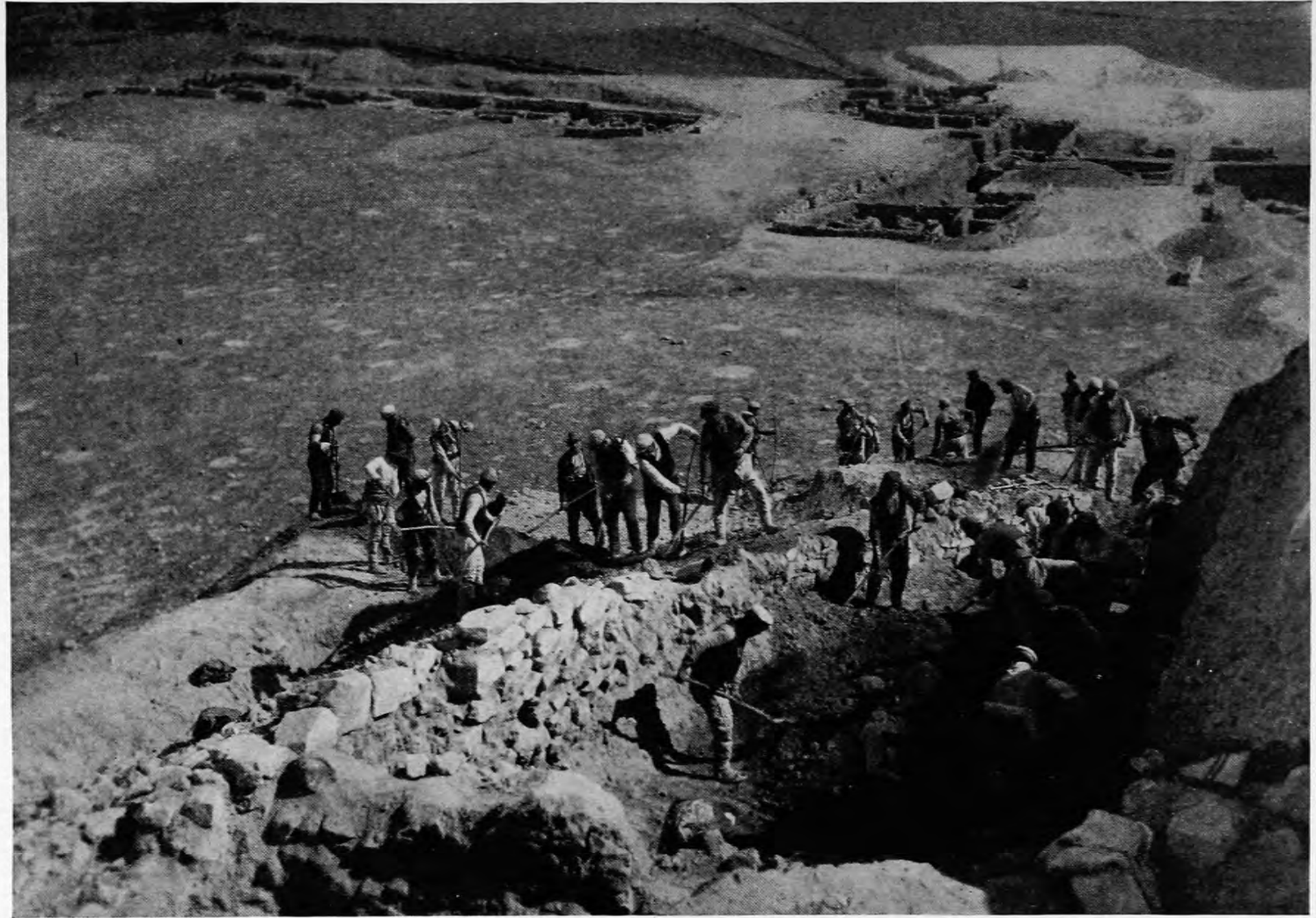


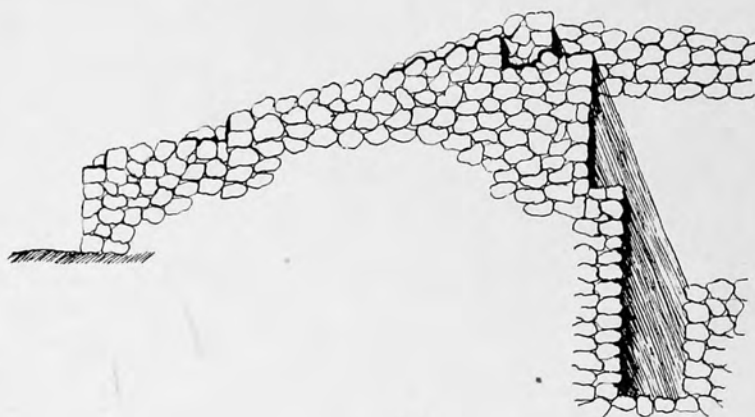
FIG. 188.—THE CITADEL WALL. AT WORK ON UNIT D



THE ALISHAR HÜYÜK



FIG. 189.—THE CITADEL WALL. INNER FACE OF UNIT D



IV

FIG. 190.—THE CITADEL WALL. CROSS-SECTION NO. IV. SCALE, 1:100

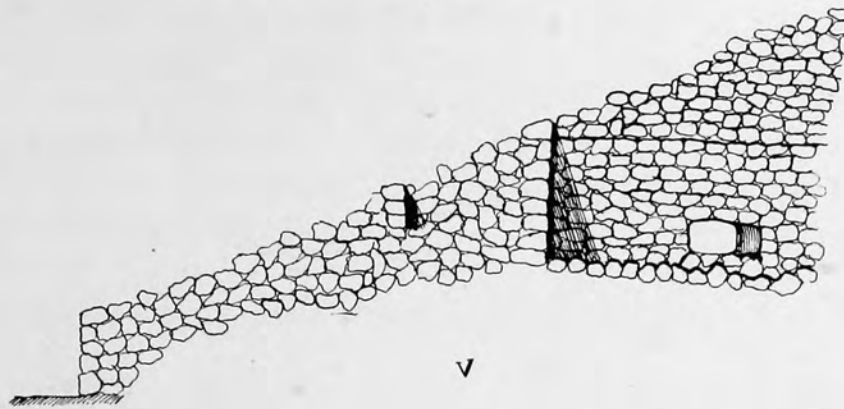


FIG. 191.—THE CITADEL WALL. CROSS-SECTION NO. V. SCALE, 1:100



FIG. 192.—THE CITADEL WALL NEAR CROSS-SECTION NO. V

THE ALISHAR HÜYÜK

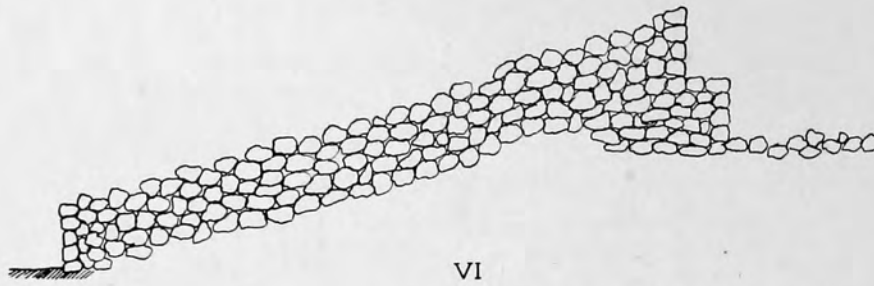


FIG. 193.—THE CITADEL WALL. CROSS-SECTION NO. VI. SCALE, 1:100

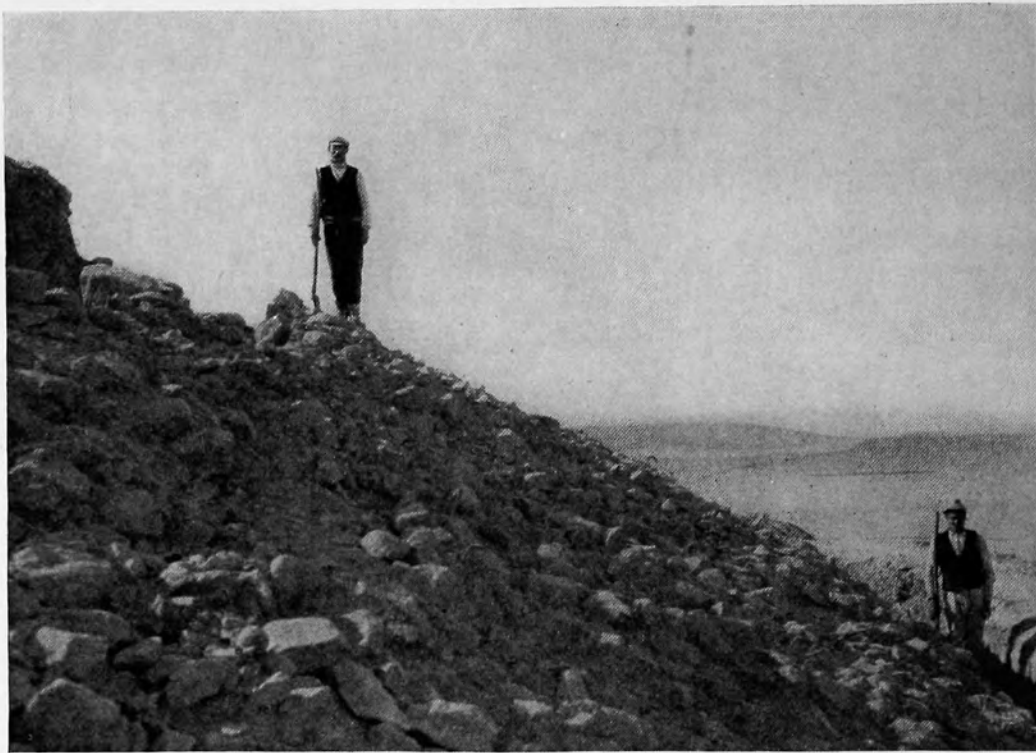


FIG. 194.—THE CITADEL WALL, SHOWING WIDTH NEAR CROSS-SECTION NO. VI

## THE FORTIFICATIONS

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A local problem still to be solved is the relation of the two walls above described to each other. Do they really belong to the same period? If so, do they form a fortification planned and built at one time, or were they erected piecemeal? These questions will, of course, be solved by our future excavations. It may be tentatively suggested here that the citadel itself may at one time have been connected with the main *kerpich* wall, which in its turn may have surrounded Mounds B, C, and D, forming the city's defense on that side. It is common in oriental fortification to make the citadel itself a part of the city wall.

Of the history of the fortress we know as yet only that it was partly destroyed by fire, as in several places the wall is blackened and pottery fragments found at its level were discolored by heat.



## VIII

### STRATIGRAPHIC STUDIES: THE TEST PLOT

#### OUR METHOD

Our entire excavation was carried on according to stratigraphic principles. The ground was sectioned in horizontal layers. Our scales, however, were flexible, adapted to the situation in each plot. Floors, pavements, pits, the depth of the daily diggings—these were our units of recording. In this manner we first acquired a good knowledge of the sequence of the various culture layers and their contents.

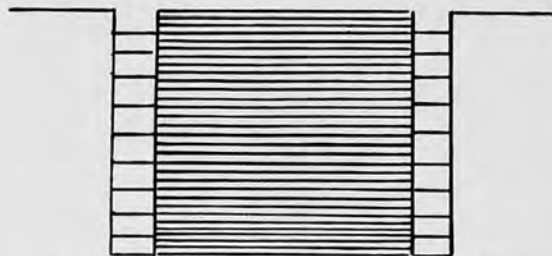
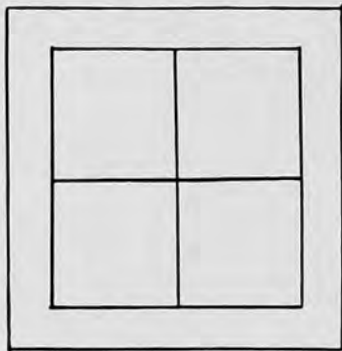


FIG. 195.—THE TEST PLOT. PLAN OF HALVED AND QUARTERED CORE WITH SURROUNDING TRENCH, AND SECTION OF CORE AND TRENCH

But there was need for a more accurate instrument with a rigid scale of small units to verify or to correct the results obtained during the general excavations and to give accurate information about the time relations and the associations of the various objects, especially the pottery, about the depth of the successive deposits, even though for only one particular area at present, about the lines of demarcation between the various divisions, and the like. The instrument tried out by us previously with success in other regions,<sup>1</sup> but now for the first time applied at a *höyük* in Asia Minor, was given by the stratigraphic method.

The place for this study was selected between Plots X and XVIII, where few relatively recent structures were to be anticipated. Here a core 6×6 meters

<sup>1</sup> E. F. Schmidt in *Anthropological Papers of the American Museum of Natural History*, Vol. XXX, Part V (1928).

square was marked off, as well as a trench 1 meter wide which was to encircle the core in order to prevent objects from falling on the lower deposits. With the exception of this protective trench, the entire test plot, which we called Plot X Stratigraphic Annex, was excavated with small trowels from the *hüyük* surface to the bottom of the culture deposit. The core was cut into strata .17 thick, that being the length of the trowel blades of the eight laborers employed for



FIG. 196.—STARTING WORK ON THE TEST PLOT. MOUND A IN BACKGROUND

this work. The layers of the surrounding trench were .50 deep (Fig. 195). The contents of these arbitrary strata, principally sherds, were examined separately and recorded. Those of the trench layers served only as rough-scale checking material. As a matter of caution, however, the contents of an entire stratum were not thrown together, but the core was subdivided into halves, and after Stratum V even into quarters, in order to obtain several parallel series of objects or, at worst, not to lose an entire stratum if obstacles should appear.

It may be said at once that the bottom of the deposit was reached in one and one-half quarters. The rest was lost because it was our principle to leave

*in situ* structures of any importance here as in the other plots during the first season. The progress of the work is shown in Figs. 196–201; its completed state, in Fig. 202.

### STRUCTURAL REMAINS

The whole series of structural remains uncovered in this test plot is epitomized in Figures 203 and 204. Such remains ranged in depth from .70 to 4.90,



FIG. 197.—THE TEST PLOT. TRENCH LAYER NO. 1 FINISHED; STRATUM I OF CORE, DIVISIONS *a* AND *b*, STARTED

i.e., almost to the original surface. The deepest pits extended even below the latter.

The foot of Wall 1, on a level with Wall 2 in Plot XVIII, was .90 below the surface. It consisted of a single row of large stones, for which in only a few places two rows of smaller ones were used. Its height was .25. Both this wall and Wall 3, which was of the same type as the former and had probably once been connected with it, were removed. So were two short rows of *kerpich* bricks

(No. 2) which abutted Wall 3. The bricks measured  $.29 \times .30 \times .08$  and  $.28 \times .40 \times .08$ , and were of the usual yellowish color.

Pit 4 was .55 below the foot of Wall 1, which extended right across it. The pit was circular and inclosed by well-set stones .20-.25 in their largest dimension. Its depth was .65. The contents, as usual, were ashes and loose soil.

On a level with the foot of this pit appeared the upper edge of Wall 6, which abutted Wall 5. At their highest points these walls measured 1.00-1.30.



FIG. 198.—THE TEST PLOT. AT WORK IN STRATUM VI, NE. AND SW. QUARTERS

Though built of rather large stones, irregularly set, their edges were relatively straight.

A rectangular stone box (No. 20) containing the remains of skeleton X<sub>6</sub> adjoined Wall 6. The southwest corner of this box extended directly under Pit 4. Two stone slabs of considerable size formed its eastern and western walls, while smaller slabs bordered it on the south and north. The horizontal top slabs of Wall 6 lay directly on the upright slabs of the north wall of the stone box. The latter was carefully paved with small flat stones.

Wall 5 and also part of Wall 6 extended as deep as Wall 7, which was built



of brownish yellow *kerpich* bricks .30 long and only .05 high. It is doubtful whether the original course of Wall 7 was curved to such an extent as it appeared when found. The border bricks may have disintegrated; and the ledge (No. 8) accompanying it at the east side, .45 below its present edge, may have reached up to its level. Wall 7 turned eastward at its northern end and broke off after a short distance.



FIG. 199.—THE TEST PLOT. SECTIONING STRATUM VII (VIEW FROM NORTH)

The *kerpich* ledge was bordered by an irregular row of stones (No. 9) which reached almost to the level of the upper edge of Wall 10. The latter, together with Walls 11 and 12, inclosed the lowermost structure here found. The *kerpich* bricks of which these walls were built had a grayish brown color hard to distinguish from the ordinary soil. The brick-marks were for the most part not visible at all; but a thin straight grayish line, the whitewash of the walls as it proved later, helped to trace their course. The upper edge of Wall 10 was on the same level as the lower stone pavement of Plot X. Wall 5 was on a level with the upper pavement of that plot.

The purpose of a rectangular protuberance (No. 13) from Wall 10, white-

washed like the latter, is problematical. So is the purpose of a *kerpich* cylinder (No. 14) found in the interior of the room. Both extended to the floor. Below the *kerpich* cylinder a thin stratum of ashes and charcoal was visible on the floor level, which stood .10-.30 above the original surface. This was struck at a depth of 5.00. The soil was hard and whitish, with no traces of culture deposit, i.e., with no ashes, charcoal particles, or objects of human manufacture.



FIG. 200.—THE TEST PLOT. AT WORK IN STRATUM XI, NE. AND NW. QUARTERS

Partly below the floor of the room and extending into the sterile soil, five pits (Nos. 15-19) were found. The edge of the last was about .50 above the floor level, although its bottom reached below the original surface (*Sf.* in Fig. 204). These pits, as well as most of the others found up to the present time, were refuse holes filled with *débris*—ashes, charcoal, and discarded pot fragments. Pit 16, however, was secondarily used as a burial place for the presumably most ancient skeleton ( $X_5$ ) found on the *hüyük* to date. It was lying on the bottom of the pit, 5.70 below the present surface of the mound and .70 below the original surface. Other skeletons ( $X_{1-4}$  and  $X_6$ ) were found at depths of 1.25, 1.50, 2.10, 2.70, and 2.75, respectively.

## THE ALISHAR HÜYÜK

## THE POTTERY

However, as already stated, we were depending, not on bulky structural remains, but on the associated pottery fragments and other small objects, for refining our chronological scale. From this particular test plot 19,008 potsherds were examined in an attempt to clinch certain observations made during the general excavations. In our earliest work on the *hüyük* we had dug mainly in



FIG. 201.—THE TEST PLOT. PIT 4 AT SOUTH WALL, WITH EDGES OF WALLS 5 AND 6 AND BOTTOM OF STRATUM XII

pre-Roman or preclassical layers and had uncovered many sherds and fragmentary pots of painted buff ware. Few classical objects were found during that phase of the work. When the excavation had reached the top of Mound A, objects of Roman manufacture were uncovered in great numbers, especially pots and potsherds with very fine paste, our "fine wares," such as Arezzo, *terra sigillata*, etc. Only at spots where the excavation was carried to a depth of 2-4 meters did the painted buff sherds appear in great numbers, while at this depth the fine wares disappeared. This was particularly obvious when the citadel wall

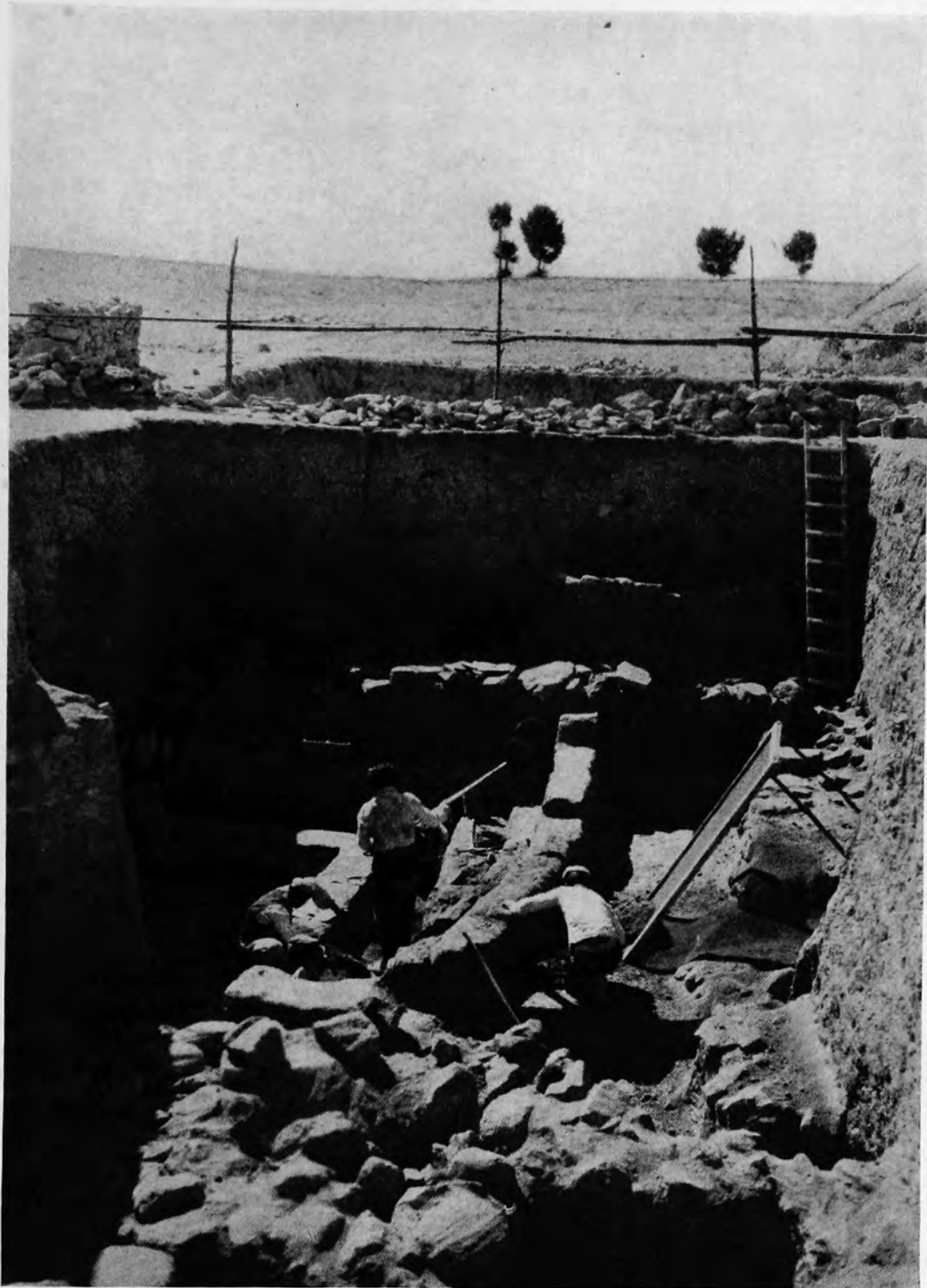


FIG. 202.—THE TEST PLOT FROM NORTH AT COMPLETION OF EXCAVATION. PLOT X IN FOREGROUND



THE ALISHAR HÜYÜK

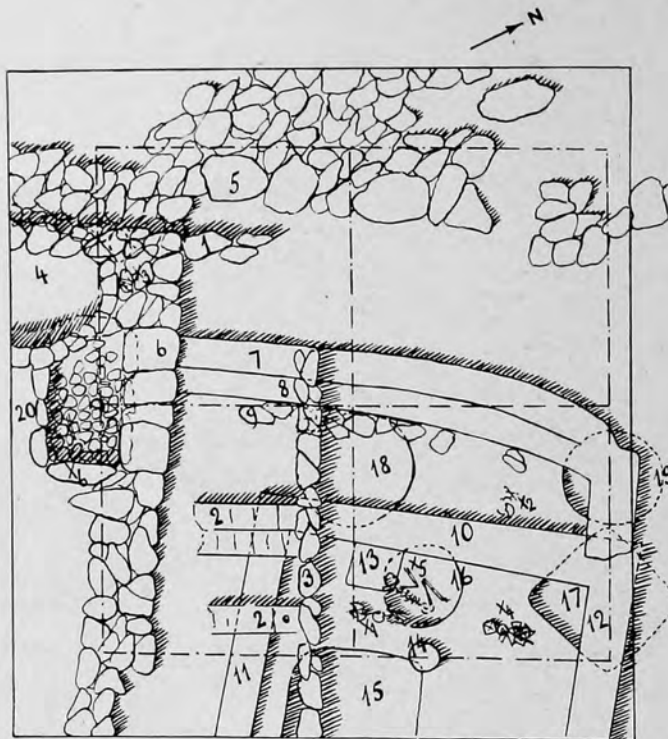


FIG. 203.—PLAN OF THE TEST PLOT AFTER EXCAVATION. SCALE, 1:100

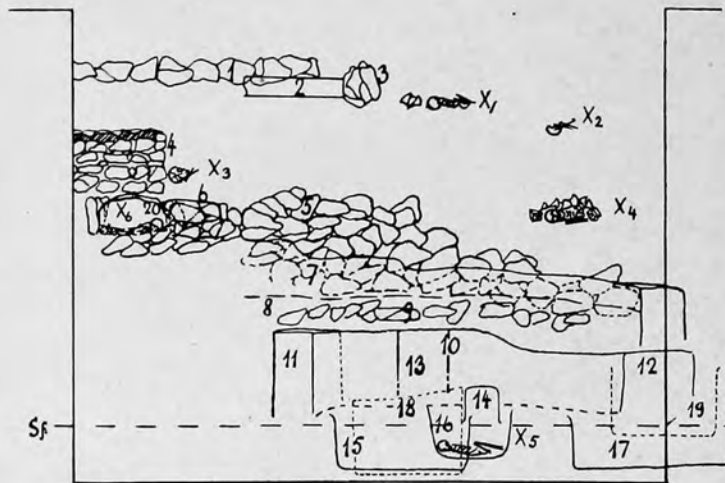


FIG. 204.—SECTION THROUGH THE TEST PLOT, WITH CONTENTS PROJECTED TOWARD THE WEST. SCALE, 1:100

below the edge of the mound and beneath the level of the Roman settlement was excavated. The situation was repeated wherever the excavation was carried below the level of the Roman period.

After the structures on top of Mound A had been excavated, another phase of the work began at the very edge of the mound terrace. Here buildings of Period II, as we called it later, were uncovered, associated with great numbers of "yellowish brown, grainy" and grayish sherds with the distinctive features of the ware of this period—triangular handles, beak-spouts, etc. Few, if any, painted sherds were found, and no fine wares. As the work in this part of the mound progressed, areas were encountered where no structures of relatively recent origin kept us from penetrating to the very base of the mound. In this manner we had found traces of an occupation still more ancient than that characterized by the "yellowish brown, grainy" pottery. But definite proof of the existence of our Period I was given only by the present stratigraphic study, which shows at this particular point the great depth of the layer in which the red-slipped, handmade pottery of that period is the unrivaled type ware. There is no greater break in the ceramic series represented at the Alishar *höyük* than that between Periods I and II; for the type ware of Period II was modeled on the wheel, which was entirely unknown during Period I.

Table I summarizes by stratum and by type the potsherds found. In Strata I–V the western half of the core was designated as "a," the eastern as "b." Thereafter the quarters were distinguished, *a* being subdivided into SW. and NW., *b* into SE. and NE. Because of interference by wall remains, burials, etc., the size of the area containing pottery varied from stratum to stratum. In fact, the space in two quarters of Strata XXII–XXX especially was too restricted to permit their being utilized at all. Under these circumstances variations in the quantity of sherds of a single group or type in successive strata or portions of strata were meaningless. Only variations from stratum to stratum in the proportion of sherds of a certain sort to the total number of sherds found in their particular area were directly comparable. The percentages in question have been worked out in Table II and have been plotted graphically in Figures 205 and 206.

Two great classes of sherds are represented: undecorated and decorated. Of these the undecorated, and among them the plain, characterless sherds especially, were by far the more numerous. In analyzing the graphs, it is evident that the plain ware curves show maxima in Stratum I, a decline toward the

## THE ALISHAR HÜYÜK

TABLE I

DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE STRATA OF THE TEST PLOT: ACTUAL NUMBERS OF SHERDS FOUND

STRATUM	PORTION	UNDECORATED				DECORATED			TOTALS
		Plain	Roman Fine Ware	Period II	Period I	Turkish, Byzantine, Roman, and Greek (cf. p. 231)	Period III	Old Painted	
I...	a	835	12	.....	5	3	16	.....	871
	b	522	8	10	10	.....	5	.....	555
II...	a	679	30	8	6	.....	20	.....	743
	b	667	76	13	.....	.....	17	.....	773
III...	a	782	42	5	14	.....	24	.....	867
	b	581	71	6	4	.....	11	.....	673
IV...	a	623	54	.....	8	.....	14	.....	699
	b	550	75	10	19	.....	18	.....	672
V...	a	554	81	34	36	1	12	.....	718
	b	544	73	27	27	.....	37	.....	708
VI...	SW.	309	50	38	23	.....	26	.....	446
	NW.	151	2	26	30	.....	3	2	214
	SE.	290	31	56	10	.....	8	.....	395
VII...	NE.	103	3	10	21	.....	5	.....	142
	SW.	298	5	56	33	1	14	.....	407
	NW.	158	3	47	56	.....	7	.....	271
VIII...	SE.	232	15	40	38	.....	4	.....	329
	NE.	110	3	12	18	.....	2	.....	145
	SW.	122	1	59	19	.....	3	.....	204
IX...	NW.	118	.....	16	23	.....	8	.....	165
	SW.	150	.....	56	39	.....	.....	.....	245
	NW.	100	.....	18	34	.....	5	1	158
X...	SE.	59	.....	4	23	.....	.....	1	87
	NE.	147	.....	24	22	.....	3	.....	196
	SW.	145	.....	39	31	.....	1	.....	216
XI...	NW.	92	.....	19	38	.....	2	.....	151
	SE.	122	.....	7	63	.....	2	.....	194
	NE.	100	.....	11	17	.....	2	.....	130
XII...	SW.	61	.....	17	26	.....	.....	.....	104
	NW.	87	.....	3	27	.....	.....	.....	117
	SE.	56	.....	2	37	.....	.....	.....	95
XIII...	NE.	109	.....	13	29	.....	.....	.....	151
	SW.	88	.....	3	26	.....	.....	.....	117
	NW.	72	.....	7	17	.....	.....	.....	96
XIV...	SE.	100	.....	4	98	.....	.....	.....	202
	NE.	95	1	.....	18	.....	.....	.....	114
	SW.	26	.....	.....	9	.....	2	.....	37
XV...	NW.	127	.....	2	29	.....	.....	.....	158
	SE.	35	.....	.....	23	.....	.....	.....	58
	NE.	54	.....	1	11	.....	.....	.....	66
XVI...	SW.	28	.....	1	11	.....	.....	.....	40
	NW.	53	.....	1	16	.....	.....	.....	70
	SE.	23	.....	.....	7	.....	.....	.....	30
XVII...	NE.	102	.....	.....	31	.....	.....	.....	133
	SW.	36	.....	1	8	.....	.....	.....	45
	NW.	29	.....	1	22	.....	.....	.....	52
XVIII...	SE.	26	.....	.....	14	.....	.....	.....	40
	NE.	43	.....	.....	36	.....	.....	.....	79

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TABLE I—Continued

DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE STRATA  
OF THE TEST PLOT: ACTUAL NUMBERS OF SHERDS FOUND

STRATUM	PORTION	UNDECORATED				DECORATED			TOTALS
		Plain	Roman Fine Ware	Period II	Period I	Turkish, Byzantine, Roman, and Greek (cf. p. 231)	Period III	Old Painted	
XVI...	SW.	14			5			19	
	NW.	42			78		1	121	
	SE.	47			28			75	
XVII...	NE.	42		1	39			82	
	SW.	46			19			65	
	NW.	61		1	47			109	
XVIII...	SE.	7			6			13	
	NE.	49			11			60	
	SW.	148		1	33			182	
XIX...	NW.	79		5	37		1	122	
	SE.	49			17			66	
	NE.	49			16			65	
XX...	SW.	74			48			122	
	NW.	118		8	35			161	
	SE.	67			21		1	89	
XXI...	NE.	160		1	49			210	
	SW.	175		3	34		1	213	
	NW.	213		1	55			269	
XXII...	SE.	97		2	28			127	
	NE.	208			29			237	
	SW.	83		2	18			103	
XXIII...	NW.	178		1	55		4	238	
	SE.	101			16			117	
	NE.	169	1	3	40			213	
XXIV...	SE.	114			13			127	
	NE.	234		2	43			279	
	SE.	142			28		1	171	
XXV...	NE.	246		3	49			298	
	SE.	109			24			133	
	NE.	159			27		1	187	
XXVI...	SE.	98			18			116	
	NE.	121		1	36			158	
	SE.	70			14			84	
XXVII...	NE.	171			28			199	
	SE.	58			17		1	76	
	NE.	196			32			228	
XXVIII...	SE.	38			14			52	
	NE.	78			16			94	
	NE.	63			11		1	75	
XXX...	SE.	37			7			44	
	NE.	31			5			36	
Totals		14,634	637	742	2,308	5	273	14	18,613

Sherds listed above ..... 18,613

Sherds from Pits 15-19 ..... 395

Total sherds examined from this plot ..... 19,008



## THE ALISHAR HÜYÜK

TABLE II

DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE STRATA OF THE TEST PLOT: PERCENTAGES

STRATUM	POR-TION	UNDECORATED				DECORATED			TOTALS
		Plain	Roman Fine Ware	Period II	Period I	Turkish, Byzantine, Roman, and Greek (cf. p. 231)	Period III	Old Painted	
I..	a	95.9	1.4		0.6	0.3	1.9		100.1
	b	94.1	1.4	1.8	1.8		0.9		100.0
II..	a	91.4	4.0	1.1	0.8		2.7		100.0
	b	86.3	9.8	1.7			2.2		100.0
III..	a	90.2	4.8	0.6	1.6		2.8		100.0
	b	86.3	10.5	0.9	0.6		1.6		99.9
IV..	a	89.1	7.7		1.1		2.0		99.9
	b	81.8	11.1	1.5	2.8		2.7		99.9
V..	a	77.2	11.3	4.7	5.0	0.1	1.7		100.0
	b	76.8	10.3	3.8	3.8		5.2		99.9
VI..	SW.	69.3	11.2	8.5	5.2		5.8		100.0
	NW.	70.6	0.95	12.1	14.0		1.4	0.95	100.0
	SE.	73.4	7.8	14.2	2.5		2.0		99.9
VII..	NE.	72.5	2.1	7.05	14.8		3.5		99.95
	SW.	73.2	1.2	13.75	8.1	0.25	3.4		99.9
	NW.	58.3	1.1	17.4	20.6		2.6		100.0
VIII..	SE.	70.5	4.6	12.2	11.5		1.2		100.0
	NE.	75.9	2.1	8.3	12.4		1.4		100.1
	SW.	59.8	0.5	28.9	9.3		1.5		100.0
IX..	NW.	71.5		9.7	13.9		4.9		100.0
	SW.	61.3		22.8	15.9				100.0
	NW.	63.3		11.4	21.5		3.2	0.6	100.0
X..	SE.	67.9		4.6	26.4			1.1	100.0
	NE.	74.9		12.3	11.2		1.5		99.9
	SW.	67.2		18.1	14.3		0.5		100.1
XI..	NW.	60.9		12.6	25.2		1.3		100.0
	SE.	62.9		3.6	32.5		1.0		100.0
	NE.	77.0		8.4	13.1		1.5		100.0
XII..	SW.	58.6		16.4	25.0				100.0
	NW.	74.4		2.5	23.1				100.0
	SE.	59.0		2.2	38.9				100.1
XIII..	NE.	72.2		8.6	19.2				100.0
	SW.	75.2		2.6	22.2				100.0
	NW.	75.0		7.3	17.7				100.0
XIV..	SE.	49.5		2.0	48.5				100.0
	NE.	83.3	0.9		15.8				100.0
	SW.	70.3			24.3		5.4		100.0
XV..	NW.	80.5		1.2	18.3				100.0
	SE.	60.4			39.6				100.0
	NE.	81.9		1.5	16.6				100.0
XVI..	SW.	70.0		2.5	27.5				100.0
	NW.	75.7		1.4	22.8				99.9
	SE.	76.7			23.3				100.0
XVII..	NE.	76.6			23.4				100.0
	SW.	80.0		2.2	17.8				100.0
	NW.	55.8		1.9	42.3				100.0
XVIII..	SE.	65.0			35.0				100.0
	NE.	54.5			45.5				100.0

## STRATIGRAPHIC STUDIES

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TABLE II—Continued  
 DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE  
 STRATA OF THE TEST PLOT: PERCENTAGES

STRATUM	POR- TION	UNDECORATED				DECORATED			TOTALS
		Plain	Roman Fine Ware	Period II	Period I	Turkish, Byzantine, Roman, and Greek (cf. p. 231)	Period III	Old Painted	
XVI.	SW.	73.7			26.3			100.0	
	NW.	34.7			64.5		0.8	100.0	
	SE.	62.7			37.3			100.0	
XVII.	NE.	51.2		1.2	47.5			99.9	
	SW.	70.8			29.2			100.0	
	NW.	56.0		0.9	43.1			100.0	
XVIII.	SE.	53.8			46.2			100.0	
	NE.	81.7			18.3			100.0	
	SW.	81.3		0.6	18.1			100.0	
XIX.	NW.	64.8		4.1	30.3		0.8	100.0	
	SE.	74.2			25.8			100.0	
	NE.	75.4			24.6			100.0	
XX.	SW.	60.7			39.3			100.0	
	NW.	73.4		4.9	21.7			100.0	
	SE.	75.3			23.6		1.1	100.0	
XXI.	NE.	76.3		0.5	23.2			100.0	
	SW.	82.2		1.4	15.9		0.5	100.0	
	NW.	79.2		0.3	20.5			100.0	
XXII.	SE.	76.4		1.6	22.0			100.0	
	NE.	87.9			12.1			100.0	
	SW.	80.5		1.9	17.5			99.9	
XXIII.	NW.	74.7		0.4	23.1		1.7	99.9	
	SE.	86.4			13.6			100.0	
	NE.	79.4	0.5	1.4	18.8			100.1	
XXIV.	SE.	89.8			10.2			100.0	
	NE.	84.0		0.7	15.3			100.0	
XXV.	SE.	83.1			16.3		0.6	100.0	
	NE.	82.6		1.0	16.4			100.0	
XXVI.	SE.	82.0			18.0			100.0	
	NE.	85.0			14.4		0.5	99.9	
XXVII.	SE.	84.5			15.5			100.0	
	NE.	76.6		0.6	22.8			100.0	
XXVIII.	SE.	83.5			16.5			100.0	
	NE.	86.0			14.0			100.0	
XXIX.	SE.	76.3			22.4		1.3	100.0	
	NE.	86.0			14.0			100.0	
XXX.	SE.	73.1			26.9			100.0	
	NE.	83.0			17.0			100.0	
XXXI.	SE.	84.0			14.7		1.3	100.0	
	NE.	84.1			15.9			100.0	
XXXII.	SE.	86.1			13.9			100.0	
	NE.	86.1			13.9			100.0	

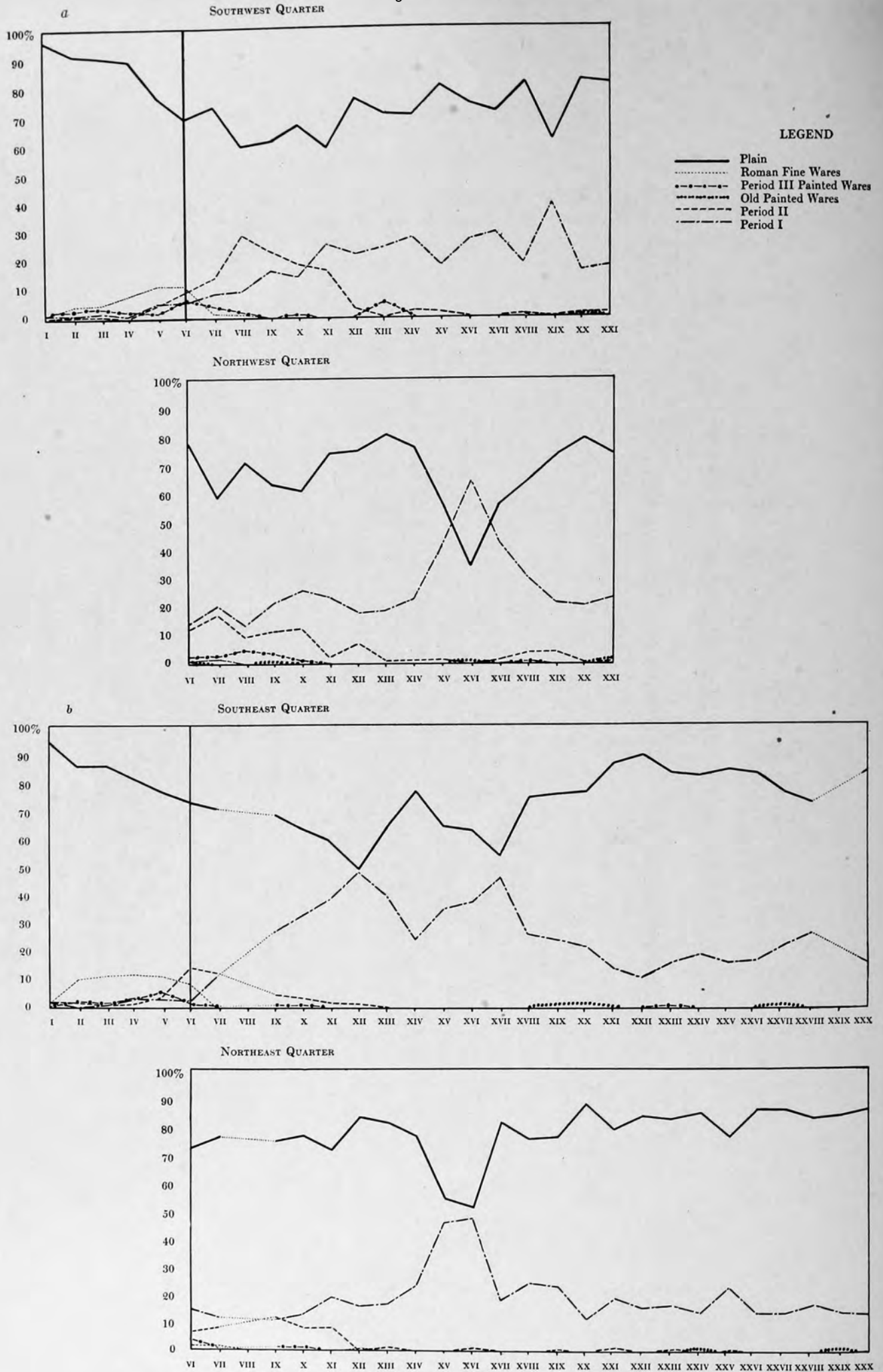


FIG. 205.—DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE STRATA OF THE TEST PLOT. GRAPHS REPRESENTING PERCENTAGES FOR INDIVIDUAL HALVES AND QUARTERS OF STRATA

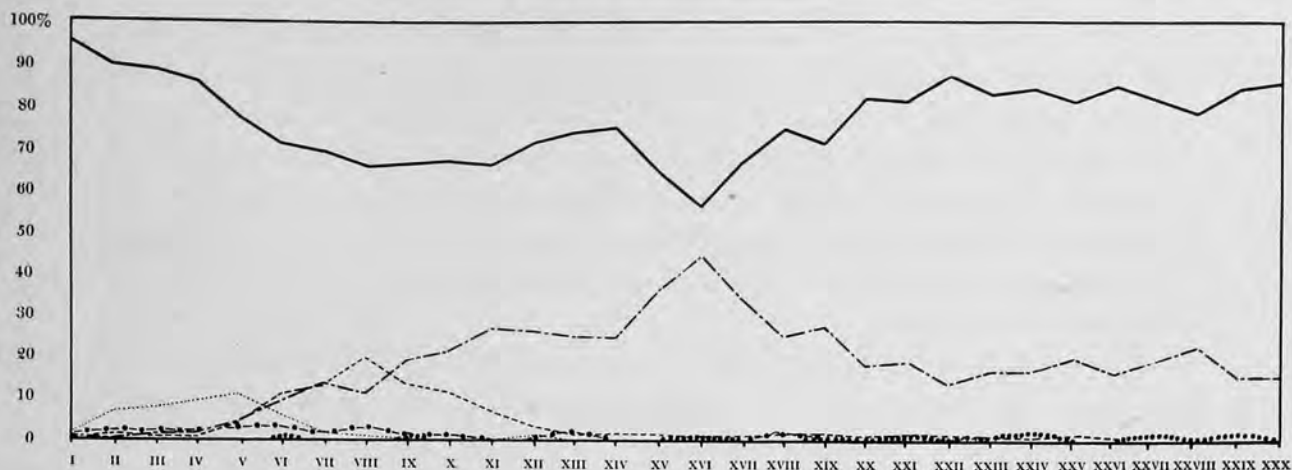


FIG. 206.—DISTRIBUTION OF POTTERY CLASSES AND TYPES IN THE SUCCESSIVE STRATA OF THE TEST PLOT. GRAPH REPRESENTING PERCENTAGES FOR STRATA AS WHOLE

central strata, then a well-maintained rise in the lower strata. This means, of course, that sherds with distinctive characteristics increase correspondingly toward the center of the deposit. The percentage of such sherds is highest in those strata which underlie the layers of fine wares and painted wares, i.e., in the layers accumulated during Period II and especially during Period I. In three graphs of Fig. 205 the minima of the plain ware curves coincide with the maxima of the Period I curves, i.e., those of the red-slipped pottery. The SW. quarter is roughly similar, though the minimum percentage of the plain ware there matches the maximum of Period II ware (yellowish brown, grainy). However, the plain ware curve of the general graph (Fig. 206) probably illustrates the situation accurately. There the minimum is in Stratum XVI, coinciding with the maximum of the Period I curve. The uniformly high percentage of plain ware in the lower strata (NE. and SE. quarters) is, of course, interrelated with the low percentage of Period I ware, since here hardly any sherds of other types were found.

Before further conclusions are drawn, it is necessary to consider the remaining curves. The course of the Roman or classical fine ware curve is almost identical in the two graphs really concerned. In both *a* and *b* it is clear that this ware belonged in Strata II–VI. The few sherds in Strata VII and VIII, and especially in XII and XXI, are stray pieces. It is particularly interesting that the sherd in Stratum XXI was found 2.50 below the bottom of the layer of its period. The Roman curve in the general graph (Fig. 206), particularly since its



apex is in Stratum V, seems to be more correct. There was a well-marked floor at the bottom of Stratum V. The fact that fourteen objects other than pottery were taken from this stratum (cf. list on pp. 236-37), as well as the distribution of glass and iron objects (cf. Fig. 208), are proof enough that Stratum V was at the bottom of a layer, in this case the Roman or classical layer marked by the fine wares. Support for this statement is furnished by the lack of specimens other than potsherds in Stratum VI. Only a small glass sherd and two lumps of iron were found there.

As a whole, the Period III layer is far less well defined than the Roman. In part, the curves contradict information obtained at other points during the general excavations. The painted buff sherds of Period III fall mostly into the layer of the Roman fine wares, though extending also below the fine-ware strata as far as Strata IX and X. These last are in the layer of Period II ware, which was considered older than the Period III painted ware, but may possibly overlap in time. However, the apices of the painted buff ware curves occur in Strata Vb and VIa, i.e., near the bottom of the fine-ware layer. In that layer relatively few painted buff sherds were found, while the latter predominated over the fine wares in the layer below. The lack of a well-defined layer of Period III in our test plot is puzzling, because in Plot XXIX we encountered a layer of this period between 3 and 4 meters thick, as indicated by the presence of the painted buff ware. The only explanation would seem to be that the layer of Period III occupation must have been thoroughly disturbed by the people who settled here during the Roman or classical period.

Some sherds of crude technique with simple band decorations were found from Stratum VI downward. These "old painted wares" are earlier than Period III. A few fragments of similar nature were found in other plots associated with objects of Periods I and II. It is not yet known exactly where these sherds fit in.

The layer containing sherds of Period II (typically yellowish brown, grainy) is again rather well defined. The curves suggest that this layer follows immediately below that of the Roman fine wares. Strata VI-XI belong to Period II. The few sherds of Period II type found below Stratum XI may be considered stray pieces. The strata of Period II have a trivial depth in this plot as compared with the thickness of the corresponding deposit in Plots XIV and XV. There the Period II deposit was from 3 to 4 meters thick and reached to the original level, 6 meters below the present surface of the mound, while Period I,

next to be considered, was almost entirely absent. This means that the settlements or refuse deposits of the two periods did not everywhere overlap.

At the spot where this stratigraphic study was made, the deposit accumulated during Period I was by far the deepest. With Strata VIII, X, and XI of the various graphs, the curves of the red-slipped, handmade ware typical for Period I rise from the tangle of other curves and thereafter predominate to the very bottom of the core. In the general graph (Fig. 206) the situation is probably represented more correctly than in the individual graphs. In the NW. quarter (cf. Fig. 205) the Period I percentage is even greater than that of Period II in the strata of maximal occurrence of the latter wares. This, as well as the extension of red-slipped sherds into the uppermost strata, probably indicates a relatively greater number of sherds originating in Period I. Not considering this point, it would appear that the ware of Period II came into use toward the end of Period I. However, this was not verified by our observations elsewhere. It should be emphasized that there is a radical difference in every respect between the type wares of the two periods.

From the five refuse pits which extended partly through the lowermost strata of the core and partly below the original surface, 395 sherds were taken. They represented the same types and ratios of frequency as the sherds of the lower strata.

On account of their trivial numbers, the following sherds are grouped in the tables and omitted from the graphs: one Turkish glazed sherd from Stratum I, one Byzantine glazed sherd from Stratum I, two Roman painted sherds from Strata I and V, and one Hellenistic painted sherd from Stratum VII.

The positions of the percentage curves representing the type wares of Period II and of the Roman or classical period agree very well indeed with our general observations concerning their place in the series. It was anticipated that the curve based on the sherds of Period III would extend between those of the Roman layer and of Period II, and that its figure would be similar to theirs. But its position proved not to agree with the general situation. As an explanation, it has already been suggested (p. 230) that disturbances of the soil had probably taken place during the Roman period, destroying the proper sequence of the layers and their contents.

Few definitely Hellenistic objects were found—the one painted sherd in Stratum VII and a small bronze bust in Stratum IV. Neither here nor in the other plots excavated was it possible to separate the classical layer into Roman

and Greek. But by far the greater number of potsherds and other objects found in that layer seem to be Roman.

The last occupants of the mound were the Turks. One glazed sherd (cf. p. 231) and three pipe heads (*chibuk*) of burned clay (described on pp. 236 and 238), found in the uppermost stratum, are the only evidences at this spot. In Plots VII, VIII, XIII, etc., however, many glazed sherds and other objects of Turkish manufacture were uncovered in the structures right below the mound surface.

Taken as a whole, it is remarkable that in spite of manifold disturbances of the soil by the building of houses, pits, and roads, by the burying of the dead, and by the activity of animals, the pottery made during the successive periods was largely found in those layers where it had been deposited, though several millennia must have passed since the first settlers came to this site.

The approximate thicknesses of the well-defined layers in this particular plot are as follows:

Roman or classical.....	.65
Period II.....	.85
Period I.....	3.20

It must here be emphasized that our chronology is based on the work of only one season. Our pottery scale includes classes or types which will undoubtedly be further subdivided during the progress of the work. The scale divisions will become smaller as our knowledge concerning finer distinctions increases. However, the principal ceramic periods and their time relations are established, a fact of immense value for any future work at the same mound or in the surrounding territory.

#### OTHER FINDS

An exceedingly instructive series of objects (Fig. 207) was recovered in the successive strata of the core, as well as in the protective trench.

Turkish clay pipe heads appeared in the top stratum of the core and in the top layer of the protective trench.

Glass fragments and objects of iron were massed in Strata I-V (Fig. 208). Iron objects included broad-headed nails (those from Stratum I with slender stems, in contrast to the thick-stemmed specimens from Stratum V), a spear head, a long nail, and a wedge-shaped object.

As to bronze, a small Hellenistic bust was found in Stratum IV. A stylus(?) appeared in Stratum V, which was the bottom of the recent layer in general and



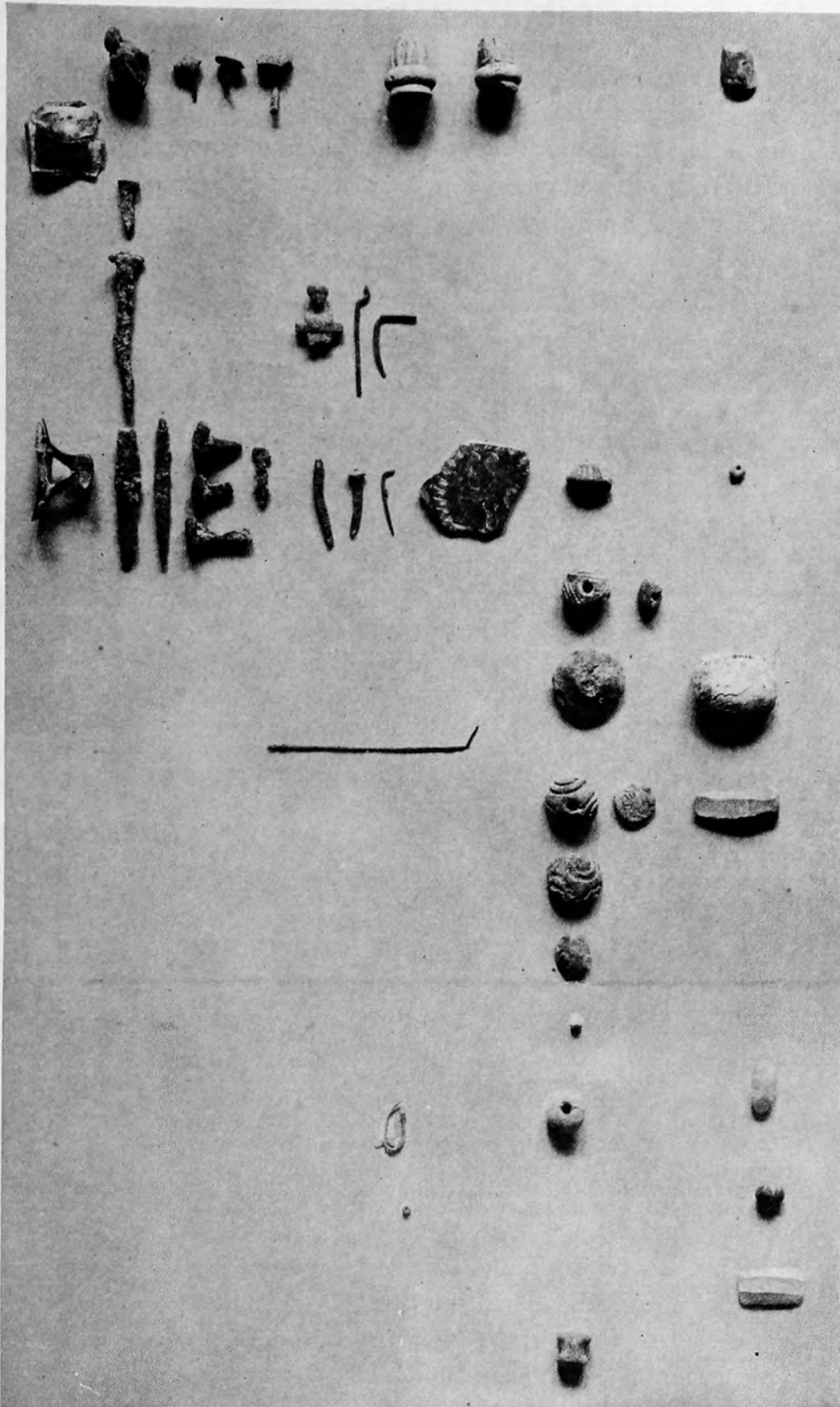


FIG. 207.—GLASS, IRON, BRONZE, POTTERY, AND STONE OBJECTS FOUND IN THE CORE OF THE TEST PLOT



## THE ALISHAR HÜYÜK

of the Roman or classical in particular. In Stratum IX, falling into the Period II layer, a long bronze needle or awl was uncovered; and in Strata XVII and XIX, i.e., in the layer of Period I, occurred a bronze or copper pin and a bronze or copper bead respectively.

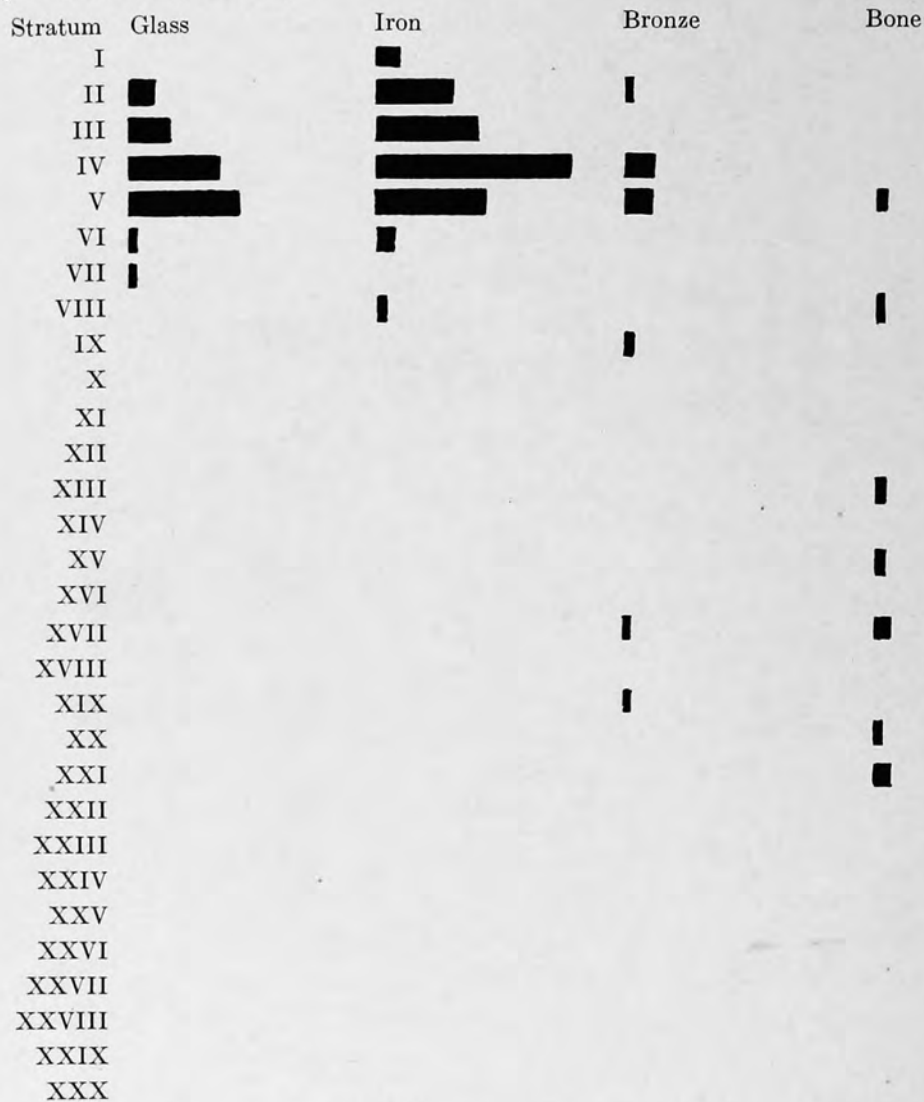


FIG. 208.—DISTRIBUTION OF GLASS, IRON, BRONZE, AND BONE OBJECTS IN THE CORE OF THE TEST PLOT

Regarding pottery objects in addition to the above-mentioned pipe heads, an interesting *terra sigillata* sherd from Stratum V is illustrated in Figure 207. It bears impressed representations of typical Roman sandals. The most instructive pottery specimens, other than sherds, are the "whorls." With the ex-

ception of one fragment, all were found below Stratum V. The deepest-lying ornamented whorl was recovered in Stratum XIV. It is significant that none occurred in the remaining sixteen strata of Period I. Most of these punctuated or incised pottery whorls were probably made, then, during our Periods II and III. As a matter of fact, great numbers of them were found in the Period II and III layers during the general excavations.

As to artifacts of stone, mace heads slightly elliptical in side view, as represented by the fragment in Stratum VIII, were most frequent in the layers of the earliest two periods, particularly in that of Period I. The flake knives or scrapers, found in Strata XI and XXV, and the quartz crystal and miniature hammer, from Strata XVII and XIX respectively, are evidently of similar age. The dating of the stone whorls found in the protective trench is uncertain.

Bone specimens, particularly awls, occurred almost solely in the layers of Periods I and II, a phenomenon repeated wherever the excavation was carried through late deposits to those of the first two periods. Bone pins such as the specimen from Stratum XVII are typical for Period II, though this particular piece was found in the Period I layer.

In Figure 208 the relative frequency of objects of glass, iron, bronze, and bone is represented. It has not been considered whether the objects of iron or bronze had been modeled into any form. The items are arranged according to the strata from which they were taken.

In this plot the distribution of glass and iron objects coincides strikingly with that of the Roman or classical fine wares. Glass and iron do not occur below the classical layer. To be sure, on account of the disturbance of the preceding Period III layer and the presence of pottery of that period within the classical strata, it was impossible to determine to what extent iron and glass were known during the preclassical occupation of the site. However, in other plots iron objects were frequently found associated with Period III objects.

It appears certain in any event that neither iron nor glass was in use during our Periods II and I, while objects of copper or bronze seem to have been employed as far back as Period I. However, during the general excavations exceedingly few copper or bronze objects were uncovered in the lowest layer.

As to objects made of bone, it was determined in other plots that these objects, especially pins and awls, decreased in proportion to the increase of metal objects.

A catalogue of objects found in this test plot<sup>1</sup> is appended.

<sup>1</sup> Exclusive of pottery; the only exceptions are Field Nos. 2066, 2116, and 2121.

CATALOGUE OF OBJECTS FROM PLOT X  
STRATIGRAPHIC ANNEX

Field No.	Stratum	Portion	Object
2044.....	I	a	Turkish clay pipe ( <i>chibuk</i> ) head, tubular, ring-shaped offset, arrow ornamentation on stem, broken, .038 long, top .021 broad, orifice .01 wide
2045.....	I	a	Iron object, heavily oxidized, irregular shape, .042 long, .02 broad, .021 thick
2046.....	I	a	Iron nail, .023 long, head .014×.008
2047.....	I	a	Iron nail, .027 long, head .016×.011
2048.....	I	a	Yellow paint stone? .03×.019×.008
2049.....	I	b	Turkish clay pipe ( <i>chibuk</i> ) head, tubular, ring-shaped offset, arrow ornamentation on stem, broken, .033 long, top .02 broad, orifice .009 wide. An inscription, in which "Allah" is legible, encircles stem
2050.....	II	a	Roman coin
2051.....	II	a	Iron nail, .029 long, rectangular head .011×.009
2052.....	III	a	Glass sherd, bottom(?), rectangular with convex center, .04×.04
2053.....	IV	a	Bronze pin, plain, .044 long, .003 thick
2054.....	IV	a	Bronze pin, one end bent in a semicircle, fragment, .059 long, .002 thick
2055.....	IV	a	Iron nail? .088 long, .01 broad; oblong rectangular head .02 broad
2056.....	IV	b	Bronze statuette (bust), Hellenistic, representing woman with hair dressed in knot at the back
2057.....	V	a	Iron piece, irregular in form, .031 long, .008 average breadth
2058.....	V	a	Iron nail, .027 long, head .025 broad
2059.....	V	a	Iron nail, .023 long, head .019 broad
2060.....	V	a	Iron nail, .036 long, head .021 broad
2061.....	V	a	Iron spear point, double point with rectangular cross-section, .081 long, .006 broad
2062.....	V	a	Iron wedge, .073 long, .009 broad
2063.....	V	a	Bronze pin with broad, flat head and flat point, .036 long, .005 broad; head .0095 broad, .001 thick
2064.....	V	a	Rectangular stone slab fragment, .026 long, .008 broad, .003 thick
2065.....	V	a	One-half of a clay whorl decorated by punctuated lines, .02 thick, diameter .025
2066.....	V	a	<i>Terra sigillata</i> sherd impressed with figures of sandals
2067.....	V	a	Point of bronze pin, .04 long, .0015 thick
2068.....	V	a	Spatulate bronze object (stylus?), .048 long, .005 broad, with rectangular cross-section

## STRATIGRAPHIC STUDIES

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Field No.	Stratum	Portion	Object
2069.....	V	a	Quartz bead, .06 high, diameter .08; diameter of perforation .002
2070.....	V	a	Brown glass handle, elaborate
.....	VI	.....	.....
2071.....	VII	a	Fragment of pottery effigy
2072.....	VII	a	One-fourth of a pottery whorl decorated with punctuated lines
2073.....	VII	SE.	Pottery whorl decorated by roulette; punctuated lines leave triangular space in center with perforation in middle; .018 thick, diameter .0265
2074.....	VIII	NW.	Crude, disk-like clay whorl, .017 thick, diameter .04
2075.....	VIII	NW.	Polished, rectangular bone slab, two holes at each end, .057 long, .009 broad, .005 thick
2076.....	VIII	SE.	One-fourth of mace head, grayish green stone, .041 high
2077.....	IX	SW.	Bronze needle, head broken, .121 long, .002 broad
.....	X	.....	.....
2078.....	XI	SW.	Pottery whorl decorated by roulette; dotted grooves form three double-lined ovals, leaving a triangular space in center with the perforation; elliptical cross-section; .018 thick, diameter .03
2079.....	XI	SE.	Clay disk with nail impressions, .006 thick, diameter .023
2080.....	XI	NE.	Flake of chalcedony, possibly scraper, .046 long, .015-.019 broad
.....	XII	.....	.....
2081.....	XIII	NW.	Broad bone awl made from leg of animal, point polished, .136 long, head .04 broad
2082.....	XIII	NW.	One-half of pottery ball ornamented by three units of two concentric circles each, made with the roulette or a pointed instrument; diameter .03
2083.....	XIV	NW.	Fragmentary clay ball, decorated with punctuated(?) rings; diameter .023
2084.....	XV	NE.	White tubular bead of brittle material (found near left hand of X <sub>4</sub> ), .0075 long, .006 broad; diameter of perforation .0015
2085.....	XV	NE.	Perforated animal tooth (found below mandible, at throat of X <sub>4</sub> ), .03 long; diameter of perforation at lower end .002
.....	XVI	.....	.....
2086.....	XVII	NE.	Fragment of bone awl, .062 long
2087.....	XVII	NE.	Bronze pin, broken and bent, now .055 long
2088.....	XVII	SE.	Quartz crystal, .026 long, .014 broad
2089.....	XVII	NE.	Fragmentary plain pottery whorl, .015 thick, diameter .024
2090.....	XVII	NE.	Bone pin with circular disk head; .09 long, .003 thick; diameter of head .006
.....	XVIII	.....	.....



## THE ALISHAR HÜYÜK

Field No.	Stratum	Portion	Object
2091.....	XIX	NW.	Bronze bead, .005 broad, .0035 thick; diameter of perforation .002
2092.....	XIX	SE.	Miniature hammer, polished diorite, with groove all around; one rounded head; semiglobular, slightly pointed second head; .016 long, first head .009 broad, second head .011 broad
2093.....	XX	NE.	Fragmentary bone awl, .037 long, .012 broad
2094.....	XXI	SW.	Point of bone awl, .047 long
2095.....	PXI	SW.	Point of bone awl, "steeple" style, .057 long
.....	XXII	.....	.....
.....	XXIII	.....	.....
.....	XXIV	.....	.....
2096.....	XXV	SE.	Jasper(?) flake, knife or scraper, .037 long, .02 broad, .0025 thick
.....	XXVI	.....	.....
2097.....	XXVII	NE.	Clay piece, anvil-shaped, .019 high, .016-.02 broad
.....	XXVIII	.....	.....
.....	XXIX	.....	.....
.....	XXX	.....	.....
	Trench Layer	Depth	
2098.....	1		Circular polishing-stone, somewhat irregular, one face smooth; .016 thick, diameter .035
2099.....	1		Turkish pipe ( <i>chibuk</i> ) head, gray clay, pointed bottom; arrow design on stem (broken); .037 long, .029 broad, .025 high
2100.....	2		Bone pin, pointed, with somewhat thickened head; .055 long, .0035 broad
2101.....	2		One-fourth of mace head, diorite
2102.....	2		Flat, slightly rounded stone whorl, .009 thick, diameter .026; diameter of perforation .005
2103.....	3		Fragmentary bone pin with incised ornamentation; .062 long, .003 broad
2104.....	3	1.20	Stone object, somewhat conical, apex flattened out and perforated, base concave, depression .01 deep and smooth; .062 high, diameter of base .032
2114.....	4		Rectangular smooth bone slab, two holes at each end; .05 long, .01 broad, .005 thick
2115.....	4		Stone whorl, diorite, elliptical cross-section; decorated with four series of 5 or 6 strokes each, radiating from center
2116.....	4	2.00	Fragmentary cup, wavy red ware, red slip over whitish wash, handmade; round bottom, seemingly round lip, and small, low rounded handle; .06+ high, diameter .086+, rim .005 thick, bottom .003 thick

## STRATIGRAPHIC STUDIES

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	Trench Layer	Depth	
2117.....	4		Fine bronze pin with square pointed head; .117 long, .0035 thick, head .009 thick
2119.....	5		Circular white stone with a hole .017 deep in center of one side. The hole shows a further depression in its center, diameter about .01, well polished. Cross-section elliptical; stone .035 thick, diameter .06
2120.....	5		Crude small clay disk, concave on both sides, .008 thick, diameter .017
2121.....	6 (N.wall)	2.80	Red-slipped cup, handmade, with pointed bottom (somewhat flattened) and most probably high rounded handle; light red color, paste medium and brown; .046 high, .005 thick, diameter .095
2122.....	6	2.60	Broken decorated pottery whorl, elliptical in cross-section, ornamented with three groups of three curved incisions on one face; .015 thick, diameter .03, diameter of perforation .005
.....	7		.....
2123.....	8		Short bone awl made from animal leg; .078 long, .017 broad
2124.....	9		Core of brown flint
2125.....	9		Short bone awl, .06 long, head .016 broad
	Source		
2105.....	East wall, 1.00-1.70 Pit 1		Rectangular sandstone fragment .079 long, .065 broad, .042 thick. Both faces and one long edge were carved to form molds. That on edge was for a long, converging tool with broad, rounded point. This mold was .071 long (incomplete), .004-.013 broad, and .007 deep. A well-preserved mold on one face, accompanied by others less distinct, was .005 deep, for an object .015 broad with blunt point and slightly curved edges
2106.....	East wall, 1.00-1.70 Pit 1		Fragmentary bone pin, rough, head seemingly disk-shaped, point missing; .044+ long, .0025 broad
2107.....	East wall, 1.00-1.70 Pit 1		Complete bone pin, polished, .0645 x .0025 x .002; diameter of circular head .0055
2108.....	East wall, 1.00-1.70 Pit 1		Clay "cake" with concave bottom, top impressed by tubular instrument, side indented; .017 thick, diameter .031
2109.....	East wall, 1.00-1.70 Pit 1		Clay ball, somewhat irregular; diameter about .03
2118.....	East wall, 1.75-2.90 Pit 2		Clay whorl with flat bottom and rounded top; punctuated, interrupted, concentric circles; .016 thick, diameter .033, diameter of perforation .005
2110.....	Dumped soil from Strata I-V		Tubular blue glass bead

	Source	
2111.....	Dumped soil from Strata I-V	Short bone awl made from animal leg; .047 long, head .017 broad
2112.....	Dumped soil from 0-1.50 deep	Iridescent foot .015 high from a glass vessel, with oval base .015×.012
2113.....	Dumped soil from 0-1.50 deep	Broken bone awl .065 long, .012 broad

### DATING OF STRUCTURAL REMAINS AND BURIALS

Through our pottery studies certain strata have been definitely correlated with certain periods. To these periods, then, may now appropriately be assigned some of the architectural and other remains found in this test plot.

#### TURKISH AND BYZANTINE

A few sherds and other objects of these periods occurred in Stratum I (0-.17). There were, however, no definite occupational layers such as are indicated else-

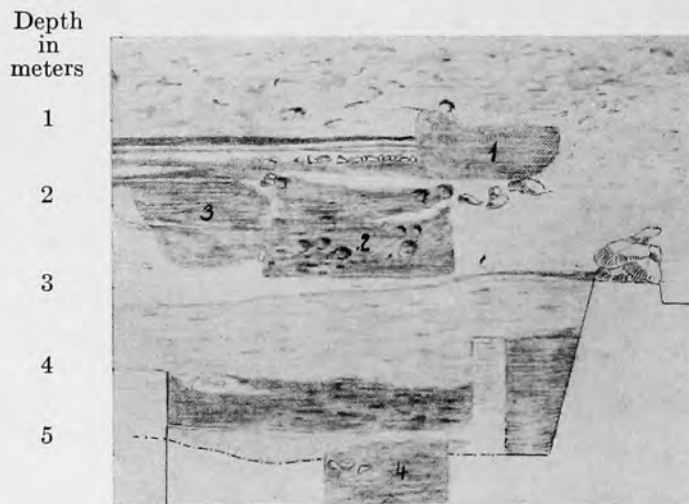


FIG. 209.—THE EAST WALL OF THE TEST PLOT.  
STRATIFICATION AND PITS. SCALE, 1:100

where by the prevalence of certain type wares. No structural remains of these periods were found, and the visible cross-section on the east wall (Fig. 209) does not show floor deposits.

## ROMAN

The layer of this period occupied Strata II-V (.17-.85 deep). It included, therefore, the wall remains Nos. 1 and 3 and the *kerpich* bricks No. 2.<sup>1</sup> The burials X<sub>1</sub> and X<sub>2</sub> also may belong to this period, since they were situated only a little below the bottom of the layer. Although a distinct floor was noticeable on the core area, the east wall of the plot has no floor markings at the depth corresponding to the bottom of the Roman layer.

## PERIOD II

The curve of the type ware of this period marked a layer extending from Stratum VI through Stratum X or XI (.85-1.70 or 1.87 deep). The orifice of Pit 4 was situated in this layer, and the skeleton X<sub>3</sub> lay a little below the bottom. The east wall shows at depths of 1.20-1.80 several well-marked floors belonging to this layer. These floors abut on a refuse pit (Fig. 209, No. 1) in which typical Period II bone pins appeared.

## PERIOD I

The layer of this period, here extraordinarily thick, extended from a depth of 1.70 or 1.87 (Stratum X or XI) to the base of the mound. At least two occupational levels are distinguishable. The upper level is represented by Walls 5 and 6, Walls 7 and 8, the row of stones No. 9, and two pits marked on the east wall of the plot (Fig. 209, Nos. 2 and 3). The skeletons X<sub>4</sub> and X<sub>6</sub> also belong to this level; for incised bricks like those found with X<sub>4</sub> were associated with a definitely Period I wall in Plot XVIII and the stone box of X<sub>6</sub> is associated with Wall 6. Only one fact opposes this attribution of X<sub>6</sub> to Period I. Two stone whorls were recovered in that burial cist, one of a type usually associated with remains not older than Period II, the other of an unknown type, large and crude. The lower level of Period I is represented by the *kerpich* structure inclosed by Walls 10-12 and by Pits 15-18, Pit 16 containing the skeleton X<sub>5</sub>.

<sup>1</sup> Except where otherwise specified, reference is to the numbers inserted in Figures 203 and 204.



## IX

## THE POTTERY

## THE TYPE WARES OF THE SUCCESSIVE PERIODS

Our effort in this volume is limited to establishing a reliable relative chronology of our local pottery and other finds. No attempt is made to link up our results with similar material known from previous publications. There has been much theorizing, but we are not yet ready to leave the solid ground of actual facts as given by our stratigraphic work. To link up our material with objects derived from other sites, and through them with historical periods, would not be difficult if we were informed about the associations of certain types of artifacts with datable objects. There are vessels and sherds known to have come from Boghaz Köi which are identical with sherds of the middle phase of our Period III. But were they associated with the clay tablets of the great Empire? Chantre (*Mission en Cappadoce*) illustrates sherds from Kül Tepe corresponding with our Period II and early Period III wares.<sup>1</sup> From which culture layer were they taken? At the Alishar *höyük* "Hittite" hieroglyphic bullae were associated with Period III pottery. But just when was the hieroglyphic writing in vogue? These problems explain our desire, first to establish a reliable relative chronology of pottery and other objects, and only then to widen our circle of action.<sup>2</sup>

## TURKISH POTTERY

Had it not been for other objects of Turkish workmanship, such as tobacco pipes, roofing tiles, etc., it would have been difficult to determine the origin of vessels like Field Nos. 3159-61. In addition to their forms (vessels like No. 3160<sup>3</sup> are frequently seen in modern Turkey) their characteristics are deeply corrugated wheel marks on the interior, ornamentally used wheel marks on the exterior, and ornamental markings produced by a rubbing instrument. As to the remaining features, it would hardly be possible to distinguish sherds which do not have these earmarks from plain-ware sherds of Period III, because sur-

<sup>1</sup> Cf. also Genouillac, *Céramique cappadoçienne*; Frankfort, *Studies in Early Pottery of the Near East*; Grothe, *Meine Vorderasienerexpedition 1906 und 1909*, Vol. I.

<sup>2</sup> Our voluminous sherd material will be dealt with after the second working-season.

<sup>3</sup> All such references in this chapter are to field numbers.

## THE POTTERY

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face, color, or paste may be similar in sherds of both periods. Some very modern-looking glazed sherds in green, black, yellow, and brown were found close to the surface. They have the appearance of recent factory-made wares, and were thus designated by our Turkish government commissioner.

An exceedingly valuable clue for determining a Turkish layer is furnished by tobacco pipes (cf. p. 232). Tobacco was introduced into Turkey in the seventeenth century.

## SELJUK POTTERY

The type ware of this period at the Alishar mound is the glazed Rakka pottery, easily identified by its bluish green glaze with iridescent silvery patina. Only fragments of this ware were found.

## BYZANTINE POTTERY

There were only a few sherds which on account of their light green glaze were attributed to this period. There were other sherds with green and brown glaze, the latter color appearing mainly in broad grooves which had apparently been produced by a spatulate object. But this type of ware continued to be made in Asia Minor long after the Byzantine period.

## ROMAN POTTERY

The type ware of the Roman period, here as at many other sites in Asia Minor, is the *terra sigillata* with its bright red slip, very close and fine ochre-colored paste, and fine, distinct wheel marks, often with ornamental effect. Representations of sandals, concentric rings, etc., were found on some sherds.

Other "fine wares" resembling *terra sigillata* included Arezzo ware with designs molded in relief on the exterior bottoms of bowls, also thick or thin brown or red wares with a paste almost as fine as *terra sigillata*. There were also a few painted sherds of equally fine paste, decorated with simple, usually narrow bands in grayish white, brown-red, and light gray. Again, there were vessels and sherds with zigzag bands in relief. Elaborately modeled bottoms, handles, and rims are typical for this period. However, it must be admitted that some of such pots and fragments as described may belong to times directly preceding or succeeding the Roman period. This is true also of the bottle-shaped vessels.

## PERIOD III POTTERY

This is the period of painted wares at the Alishar mound. There is no doubt, however, that it will be subdivided as the work progresses. To date, vessels and

sherds of entirely distinct types are still included in this period and are only tentatively separated into such divisions as "late Period III" or "early Period III."

Within this total period, as might be expected, the distinctive features are mainly found in the decorations of the vessels. Typical for the late part of Period III are No. 3254, with simple band decoration, and No. 184, elaborately decorated.

The best type vessel for the middle phase of Period III is apparently pot No. 3243, with conventionalized stags and concentric rings.

Early Period III vessels are typified by cups Nos. 3104 and 353, with geometrical designs. In contrast to all the other vessels mentioned, these last are handmade. Future work must determine whether all the vessels of early Period III were made by hand.<sup>1</sup> If so, we should be confronted with a puzzling situation, since the Period II wares, earlier and at most barely overlapping in time, are wheelmade. Explanations for such a case may, of course, be found.

#### PERIOD II POTTERY

While with Period III pottery the decoration is the distinguishing feature, form and surface treatment are the main criteria for defining that of Period II. Here an extraordinary uniformity of vessel shapes was noticed among the bowls and pitchers (the two main types) uncovered in the various plots. Every bowl belonged to one of two types: the handleless inverted cone, or the more elaborate type with ring bottom and two triangular handles. Although there was a somewhat greater variety of pitcher shapes, two types outnumbered all the others. Commonest was the pitcher with pointed oval body, round high handle, and broad beak-spout (Nos. 3249, 1412, 3135, etc.). The next most frequent type was mainly represented by a great many broken spouts (e.g., No. 3115). They are exceedingly well modeled long beak-spouts with triangular offsets below the outer end.

As in all the other culture layers of the mound, complete vessels were rare; but great quantities of sherds were found. The majority could easily be identified by their typical yellowish brown or grayish brown color, with grainy surface often coated with a wash or slip containing much powdered mica. The golden or silvery luster found on many fragments may be due to this admixture of mica. Even without the criterion of the surface treatment, the Period II layer

<sup>1</sup> That this is actually the case was determined during 1928.

would always be identifiable by the great number of pointed-bottom fragments, triangular high handles, and beak-spouts.

In the same stratum a number of pottery figurines occurred, representing persons and animals. There were also great numbers of odd-shaped hardened clay disks—"cakes"—perforated and solid, ornamented with grooves, dots,



FIG. 210.—UNIQUE PRIMITIVE POTSHERD (FIELD No. 1876) WITH INCISED DECORATION

sunlike figures, or finger prints. Others were cogwheel-shaped or were supplied with two projections. In addition, crescent-shaped pottery "handles" occurred perforated at both ends. These objects will be described in a future volume.

#### PERIOD I POTTERY

The typical pottery of this period is bright red-slipped ware, little pitchers and bowls being the most frequent forms. Some black polished and brown



polished sherds occur also. Again, there are sherds of red, black, or brown which have a corrugated surface, gentle undulations running diagonally across the exterior surface or parallel to the rim. Lateral protuberances are frequent at rims of bowls.

All vessels of this period were handmade. In addition there is a peculiar feature suggesting plant tempering, for the paste of many sherds shows small oblong depressions, marks such as are found in plant-tempered *kerpich* bricks. These marks appear also in many cases on both surfaces.

A unique sherd (No. 1876, Fig. 210) was found in Plot IX in the layer of Period I about .50-.70 above the original surface. It was crude, gray, with very irregular interior but rather smooth exterior, and ornamented with incised lines produced apparently by means of a pointed stick. The main design consisted of nearly square rectangles with a small square in each corner and a cross incised in the center. It is not impossible that this sherd represents a stratum even preceding our Period I. However, there are as yet no other clues.

#### CATALOGUE OF REPRESENTATIVE PIECES

The arrangement of this partial catalogue follows in general the progress of excavation from the surface downward. That is, the latest vessels are described first, while the earliest ones close the chapter. Most of the objects included are typical of their periods. Only three quite unusual vessels have been added in what seems their approximate chronological place between the Roman period and Period III.

##### TURKISH VESSELS OF PLAIN WARE

No. 3160 (FIG. 211), PLOT XX, DEPTH .65.—Upper part of a jug .195+ high; diameter of body .182+, of rim .064; thickness of body .004, of neck .005. Body nearly semiglobular above, converging to tubular neck which expands slightly toward lip. Latter has a sharp edge, then rounds outward. Flat handle extends from middle of neck to widest part of body.

Paste medium, light gray. Outside of jug light brown, red-brown in spots, smooth. Three groups of ornamental wheel marks occur. The most prominent is on neck partially above handle; the simpler groups are at base of neck and on upper incurve of body. Rubber marks visible on body run almost horizontally in slightly curved parallel groups of uniform length. Inside of jug is light brown, grainy. Wheel marks in neck are fine; elsewhere they form pronounced corrugations.

This and the next two vessels (Nos. 3161 and 3159) were found among the roof tiles of an Osmanli room (cf. Fig. 142).

No. 3161 (FIG. 211), PLOT XX, DEPTH .80.—Jug .292+ high; diameter of bottom .106, of body, .106–.108, of neck .038; thickness of bottom .009, of body .005, of neck .005. Long tubular body and flat bottom; sharp shoulder converges to a narrow tubular neck. Lip is broken off. Lost handle extended from upper part of neck to just below shoulder.

Medium, light brown paste, containing small stone particles. Surface too is light brown, smooth. Rubber marks are uniform, vertical on shoulder and neck. The wheel marks are not smoothed down. Three pairs, deeper than the rest, serve as ornaments: one on shoulder, one on incurve above it, and one on neck. Interior is corrugated with wheel marks.



FIG. 211.—VESSELS NOS. 3159–61. TURKISH

No. 3159 (FIG. 211), PLOT XX, DEPTH .65.—Vase or draintile .315 high; diameter of bottom .06(?), of body .091–.093, of rim .123; thickness of body .006–.014. Tubular body is narrowed toward a hole at base and expands toward lip, which is flat on top and around outer edge. Both hole and appearance suggest draintile; original presence of a bottom is questionable.

Paste medium coarse, reddish, with stone particles. Surface brick red. The wheel marks are fine at narrow end, coarser on body, and especially deep and coarse on interior.

#### ROMAN(?) LAMP

No. 3163 (FIG. 212), PLOT XXIII, DEPTH 1.30.—Lamp .026 high, .042 high including handle, .113 long; diameter of bottom .036, of body .068; thickness of bottom .004, of body .003. Ring bottom with two shallow concentric rings. Circular body elongated to form at one end a nozzle for wick and at the other a solid, flattened vertical

handle. In concave center of top are two holes—one intentional, the other perhaps accidental. Between them, a hare in low relief. At each side is a nearly semicircular band of ornament in hollow relief. From the central depression a shallow groove extends to the soot-blackened nozzle.

Paste fine, reddish. Surface smooth, apparently coated with a red wash.

Found directly below storage jar at north end of bath. Many *terra sigillata* sherds occurred in same layer. Ornamentation suggests period possibly as late as Byzantine.

#### ROMAN FINE-WARE BOWLS

No. 3270 (FIG. 213), PLOT XXIV, DEPTH 1.50.—Bowl .068 high; diameter of bottom .074, of body .202, of rim .192; thickness of bottom .005, of body .008, of rim .004. Ring bottom. Lower body flattened; incurved upper body with diverging rim. Latter is thin, rounded, steeply inclined inside.



FIG. 212.—LAMP No. 3163. ROMAN?

Paste fine, light gray, with some mica. Surface smooth, almost polished, light gray, with light brown places here and there inside. Rim shows faint wheel marks on both sides.

Bowls Nos. 3270–72 were found with other Roman vessels in a refuse pit dug through earlier deposit at south side of town wall.

No. 3271 (FIG. 213), PLOT XXIV, DEPTH 1.50.—Bowl .035 high; diameter of bottom .066, of rim .197; thickness of bottom .008, of body .006, of rim .003. Shallow, with ring bottom. Lower body flattened, curving into upper body, which stands almost vertical. Rim tapers slightly, has rounded edge.

Paste fine, light gray, with little mica. Surfaces reddish, somewhat rough, with wheel marks and bright red slip on both sides.

No. 3272 (FIG. 213), PLOT XXIV, DEPTH 2.50.—Bowl .057 high; diameter of bottom .076, of body .207, of rim .21; thickness of bottom .003, of body .004, of rim .004. Higher than No. 3271, but similar. Rim slopes inward from sharp edge.

Paste of *terra sigillata*, very fine, brown and red. Dark red slip on both sides, inter-

changing with brown and dark brown. Surfaces smooth, almost polished. Wheel marks on both sides of rim.

No. 2301 (FIG. 214), PLOT XIII, DEPTH 2.20.—Bowl .024 high; diameter of bottom .051+, of body .122+; thickness of bottom .004, of body .004, of rim .003. Body spreads outward with slight upcurve from well-modeled ring bottom and forms a ledge on which stands the somewhat diverging rim. Latter tapers somewhat; edge is rounded.

Paste of *terra sigillata*, very fine, brown-red. Bright red polished slip inside and out. Wheel marks are visible on outside of rim and occur as concentric rings with ornamental effect on bottom inside.



FIG. 213.—BOWLS Nos. 3270-72. ROMAN



FIG. 214.—BOWL No. 2301.  
ROMAN



FIG. 215.—BOWL No. 2302.  
ROMAN

Nos. 2301-2 were found with many similar sherds in a refuse pit. This extended downward so far that at the levels where they appeared sherds of Period II were frequent.

No. 2302 (FIG. 215), PLOT XIII, DEPTH 2.60.—Bowl .057 high; diameter of bottom .05, of body .118, of rim .116; thickness of bottom .002, of body .003. Slightly rounded body diverges from contracted upper end of well-modeled ring bottom. It curves inward again at the rim, which tapers to a thin rounded edge. Some fine wheel marks show on exterior.

Paste of *terra sigillata*, very fine, brown-red. Smooth, almost polished surface, with bright red slip on both sides.

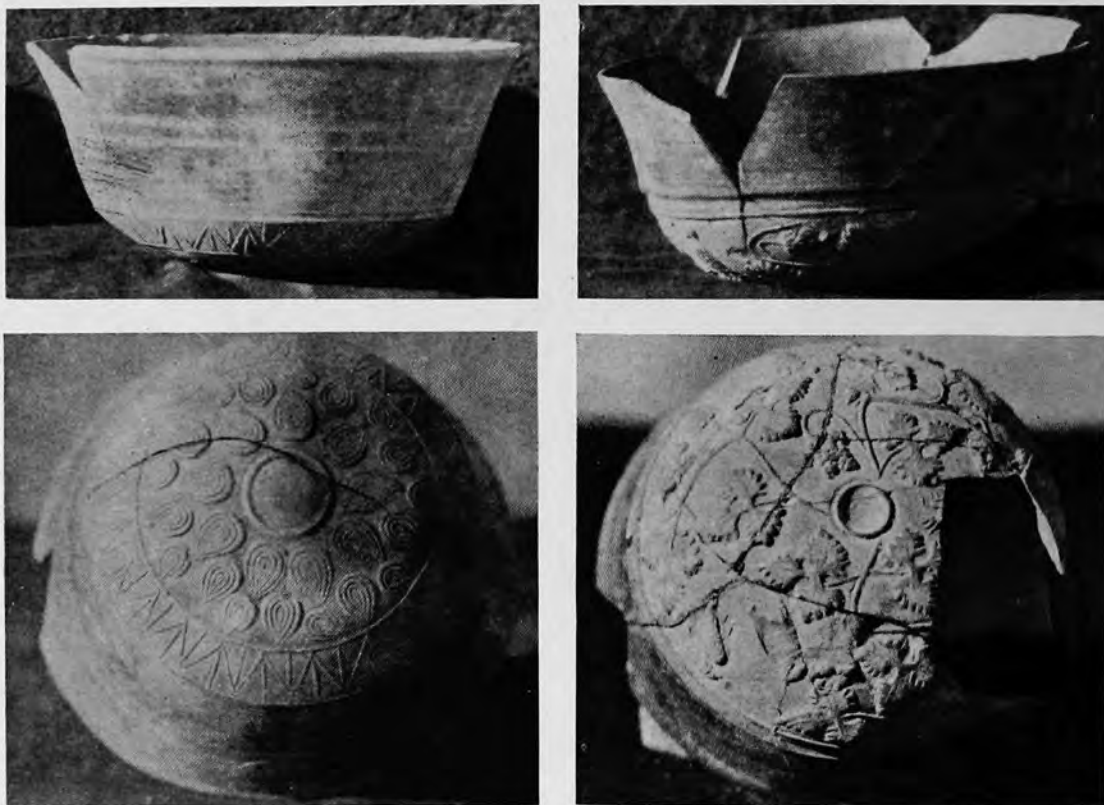
#### ROMAN BOWLS RESEMBLING AREZZO WARE

No. 3268 (FIG. 216), PLOT XXIV, DEPTH 2.50.—Bowl .093 high; diameter of bottom .033, of rim .197; thickness of bottom .004, of body .004-.007. Very shallow ring



bottom continued by shallow lower part of body, from which upper part rises steeply. Rim tapering to sharp edge; slight ridge on exterior.

Paste very fine. Lower part of body bears on exterior a molded design in low relief encircling the ring bottom. Certain irregularities repeated in identical units suggest that the pattern may have been stamped into the vessel. Design consists of three sizes of quadruple loops. Those of the largest size, nearest the center of the bowl, have their raised lines dotted. A low ridge separates the zone of loops from an outer zone of zig-



FIGS. 216 AND 217.—BOWLS NOS. 3268-69. ROMAN

zags with a vertical bisector in each angle. Ground color of this decorated part is grayish yellow, with some spots pink. Elsewhere the bowl is mainly bright red, with occasional gray, brown, and yellow spots. Bottom inside is dark brown. Upper part of exterior shows some deep wheel marks.

Nos. 3268-69, like the bowls Nos. 3270-72 (p. 248), were found in a nest of Roman pottery in a refuse pit (No. 11, p. 186).

No. 3269 (FIG. 217), PLOT XXIV, DEPTH 2.50.—Bowl .07 high; diameter of bottom .017, of rim .15; thickness of bottom .0025, of body .004-.005. Very small and low ring bottom, concave. Body shaped like No. 3268. Rim tapers to sharp edge.

Paste very fine. Design molded on lower part of body shows birds amid grapevines which bear a few clusters of grapes. Upper part of body is separated from this by a groove. Lower part is light brown; upper part is coated with a bright red slip. Interior is brown and very smooth. Fine wheel marks are visible on upper part outside and on inside.

#### ROMAN(?) BOTTLES

NO. 509 (FIG. 218), PLOT 22, DEPTH .80.—Vessel .091 high; diameter of bottom .026, of body .042, of rim .023; thickness of body .004, of neck .001. Contracted above foot, expanding then gradually to above middle, whence it contracts more rapidly into a neck which grows slightly larger toward rim. Latter forms a collar which slopes upward and inward to a sharp edge.

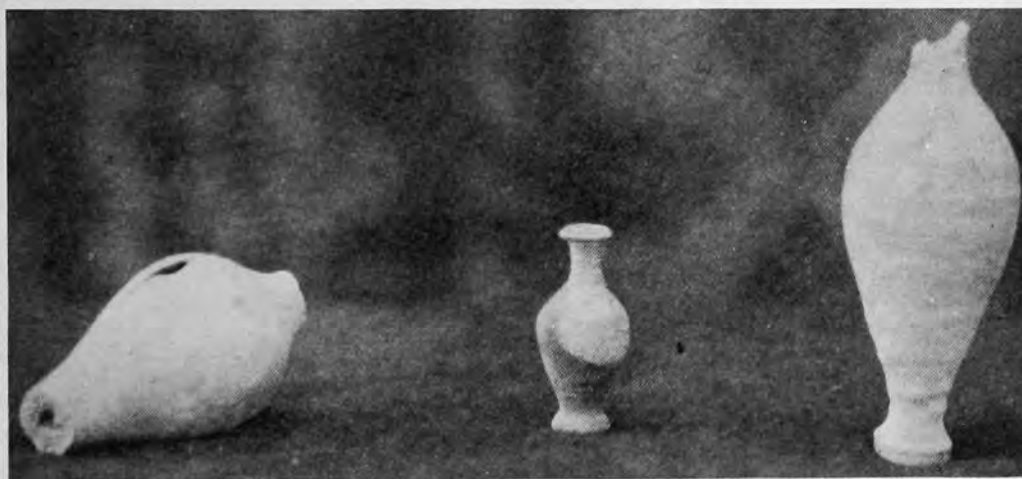


FIG. 218.—BOTTLES NOS. 575, 509, AND 510. ROMAN?

Paste very fine, brown-red. Fine wheel marks all over. A thin light buff wash partly covers the exterior. Outside of rim is painted brown-red. A spiral band of same color is applied around neck and joins the uppermost of five narrow bands of same encircling upper part of body.

Vessels Nos. 508, 510, and 511, found in approximately the same layer, are of types almost unrepresented below the classical strata of the *hüyük*.

NO. 510 (FIG. 218), PLOT 22, DEPTH .70.—Vessel .189+ high; diameter of bottom .034, of body .075; thickness of neck .005. Incomplete bottle-shaped vessel, but with remains of two handles. Bottom flat, disk-shaped. Body badly balanced on it. Body elongated; widest in upper part below handles. Rim lost.

Paste fine, brick red. Surface unsmoothed and without slip. Wheel marks visible in places.

NO. 575 (FIG. 218), PLOT 24, DEPTH 1.10.—Vessel .137+ high; diameter of body .079; thickness of neck .006. Body similar to that of No. 510, but without handles. Bottom and upper part of neck lacking.

Paste fine, light brown. Grayish white wash on surface fails in places to cover reddish brown ground.

Found among sherds which gave no clues, it is dated only by analogy with No. 510.

No. 1166 (FIG. 219), PLOT 45, DEPTH .60.—Vessel .204 high; diameter of body .066, of rim about .032; thickness of neck .004. Bottom lacking. Body and neck resemble No. 575. Rim (damaged) seems to form a collar sloping outward away from a sharp edge.

Paste fine, light brown, surfaced with a gray slip. Wheel marks present.

Found higher up than the top of the Period III layer.



FIG. 219.—BOTTLE NO. 1166. ROMAN?

#### ROMAN VESSELS WITH RELIEF ORNAMENTATION

No. 156 (FIGS. 220 AND 221), PLOT 8, DEPTH .45.—Vessel about .24 high; thickness of bottom .03, of neck .016. Bottom broken, was probably of ring type. Body has sides almost straight, expanding upward. Rim flat, projecting, with a groove around outer face.

Paste coarse, with siliceous particles; grayish, becoming brick red at surface; no slip. Wheel marks visible inside. A zigzag ornament is applied in relief around body.

Fragmentary vessels of this type were found in the Roman layer on top of Mound A.

No. 170 (FIG. 221), PLOT 8, SAME LAYER AS NO. 156 (ABOVE).—Vessel with neck .007 thick. Fragment only, without bottom, similar to No. 156. Rim forms a flat collar rounded on the outside.

## THE POTTERY

253

Paste like that of No. 156, except brick red throughout. A light brown wash seems to have been applied to both faces. Zigzag ornament again.

## UNUSUAL VESSELS

No. 155 (FIG. 222), PLOT 8, DEPTH .30.—Pot .125 high; diameter of body .047-.066, of rim .116; thickness of bottom .009, of neck .012. Rounded inward above high ring bottom. A disk projecting almost as far as does the rim separates bottom from body.

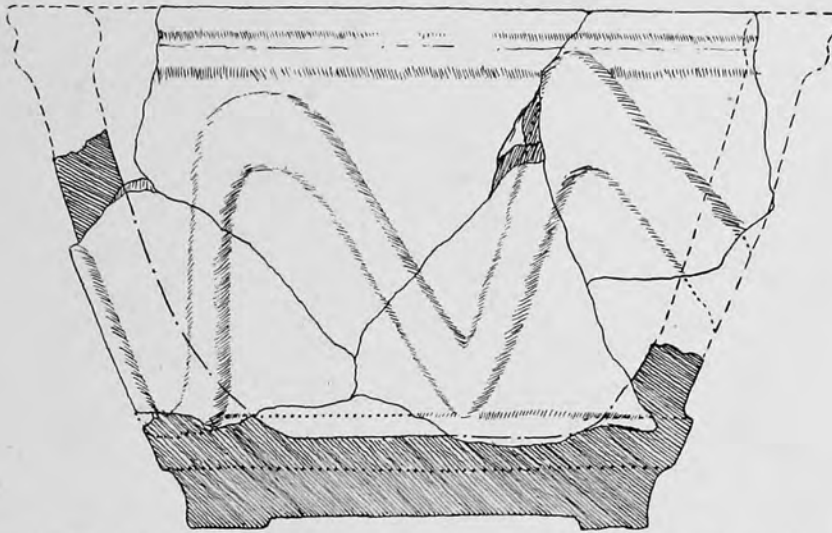


FIG. 220.—VESSEL NO. 156, AS RESTORED BY DR. VON DER OSTEN. ROMAN. SCALE, 1:3



FIG. 221.—VESSELS NOS. 170 AND 156. ROMAN

Latter is roughly tubular, expanding slightly upward, with three well-marked protruding rings. Wide, curving rim expands like a small inverted plate. Form reminds one of Mesopotamian "fumigators."

Paste is medium, reddish. Surfaces are rather smooth, covered except here and there



with a light grayish buff wash. Some faint striations suggest wheel marks, but most markings were produced by a rubber.

The inconsiderable depth and the association with No. 156 (p. 252) suggest that this vessel belongs to the Roman period. Period III buff ware sherds were found lower down; the jar No. 184 in particular (p. 256) was found *in situ* 1.20 below No. 155.

No. 231 (FIG. 223), PLOT 12, DEPTH .90.—Vase .215 high; diameter of body .07, of rim .117; thickness of bottom .011, of body near rim .005. Well-made ring bottom is separated from body by a disk .111 in diameter and .013 thick. Body expands slightly upward, then more pronouncedly just below rounded rim.

Paste fine, gray. Exterior surface smooth, gray, almost polished, with faint vertical marks left by rubber. Interior shows distinct wheel marks.

Found above present edge of supposed



FIG. 222.—VESSEL No. 155. ROMAN?



FIG. 223.—VESSEL No. 231. ROMAN?

edly pre-Roman tower. Sherds of identical technique occurred in the Roman layer on top of Mound A, but also somewhat below the Roman remains.

No. 1836 (FIG. 224), PLOT VIII, DEPTH 1.90.—Pitcher, body .079+ high; with spout, .107 high; diameter of body .096, of rim .057-.061; thickness of body .005, of neck .004. Bottom (flat?) lacking. Body smooth and rounded below. Three faint ridges appear on sharply receding upper part. Rim is rounded, expanding to a sharp edge. A flat handle extends in a high curve from rim to middle of body. Orifice is trefoil-shaped, with one lobe elongated obliquely into a broad, semitubular spout.

Paste fine, gray, with smooth surface. Wheel marks on interior. Around neck are four rows of tiny circular depressions interconnected in part by horizontal and vertical grooves.

Period uncertain. Found below an Osmanli layer in a layer where Roman and Period III sherds were mingled. Technique is like that of preceding No. 231 and other Roman specimens. Trefoil-shaped orifice is most frequent in Period III. High handle and high spout are most characteristic of Period II. Form is almost identical with that of a pitcher illustrated by G. and A. Körte, *Gordion* (Berlin, 1904), p. 61. Latter vessel came from a Phrygian tumulus which they date (*ibid.*, p. 98) to the eighth or seventh century B.C.



FIG. 224.—PITCHER No. 1836.  
PRE-ROMAN?

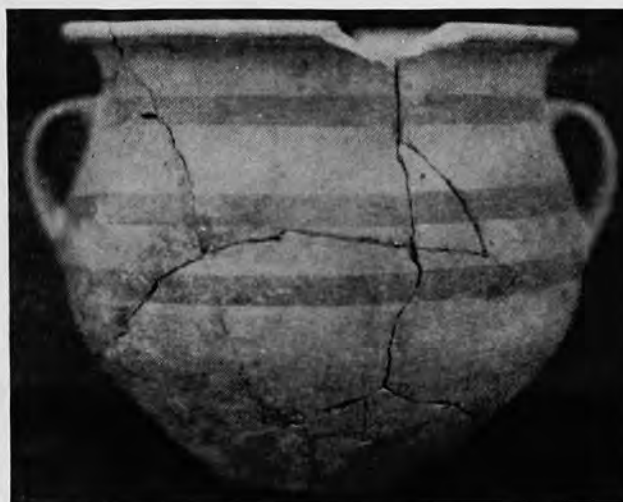


FIG. 225.—DECORATED JAR No. 3254. LATE PERIOD III

#### PERIOD III DECORATED WARE

##### LATE

No. 3254 (FIGS. 225 AND 226), PLOT XII, DEPTH 1.10.—Jar .293 high; diameter of bottom .138, of body .355, of rim .342; thickness of bottom .012, of body .007-.008, of neck .008. Flat bottom has a hole drilled through center. Body is bowl-shaped below; upper part joins lower at a very slight angle and is somewhat contracted under rim. Latter has a flat top with rounded outer edge and is grooved around inside. Two flat handles, opposite each other, are attached to upper body.

Paste medium; light gray core changes to reddish toward surfaces. Light buff to light brown slip. Three red-brown bands .016-.019 broad encircle upper body. They are interrupted by four vertical bands, one at each side of each handle. Wheel marks show on interior.

Vessels and sherds of this type were often found in the mixed layers between those

of the Roman and the pre-Roman occupations and probably belong toward the end of the latter.

No. 184 (FRONTISPIECE AND FIG. 227), PLOT 8, DEPTH 1.55.—Jar .76 high; diameter of bottom .172, of body .505, of rim .305; thickness of bottom .015, of body .009–.012, of neck .013. Bottom flat. Body oval, with greatest diameter above. Neck curves upward and outward. Rim expands inside in two concave steps; top is flat, with outer edge slanting inward. Two flat handles, opposite each other, attached to upper part of body, measure .14 long, .071–.092 broad, and .014 thick. Two breastlike protuberances on front, between and level with tops of handles, are .028 high, .068 in diameter, and .153 apart from tip to tip.



FIG. 226.—DECORATED JAR No. 3254, AS FOUND

Paste medium, with small rock particles; buff core, with reddish tinge toward surfaces. Light buff slip leaves patches of reddish buff visible. Interior shows wheel marks. Exterior bears decorations painted in red-brown and gray.

A broad red-brown band, looped upward around the handles and encircling the vase at about its middle, forms the lower border of the decoration. The red-brown neck, above, separates the body and rim designs. Rim bears on its beveled edge a floral pattern with horizontal and vertical units alternating. Design on body is divided by thin red-brown lines into three zones. Top zone, with gray border above, shows an undulating gray line the crests of which touch that border. Lancelike shapes, gray and red-brown alternately, depend from the points of contact. Middle zone contains vertical plant figures akin to those on rim. In center of front a crescent (moon?) with small ring attached is drawn. Below it, between the "breasts," is a circle outlining sun with rays(?). Latter are alternately gray and red-brown; remainder of figure is red-brown, as are the "nipples" and the outlines of the "breasts." The rest of the bottom zone, reaching to top of handles, represents birds, plants, and vines. The birds' feathers are indicated by gray dots; only their beaks, upper parts of bodies, and eyes are red-brown.

Repairs due to original owner are indicated by holes inside the rim on each side of two old fractures.

Found in a room which abutted the *kerpich* defense wall at about 3 meters above its foot. Hence neither room nor jar belong to period of construction of the wall. But Roman vessels Nos. 155 and 231 (pp. 253-54) were found 1 meter or more above this jar, if slope of surface is taken into account. Pre-Roman sherds were found near it.

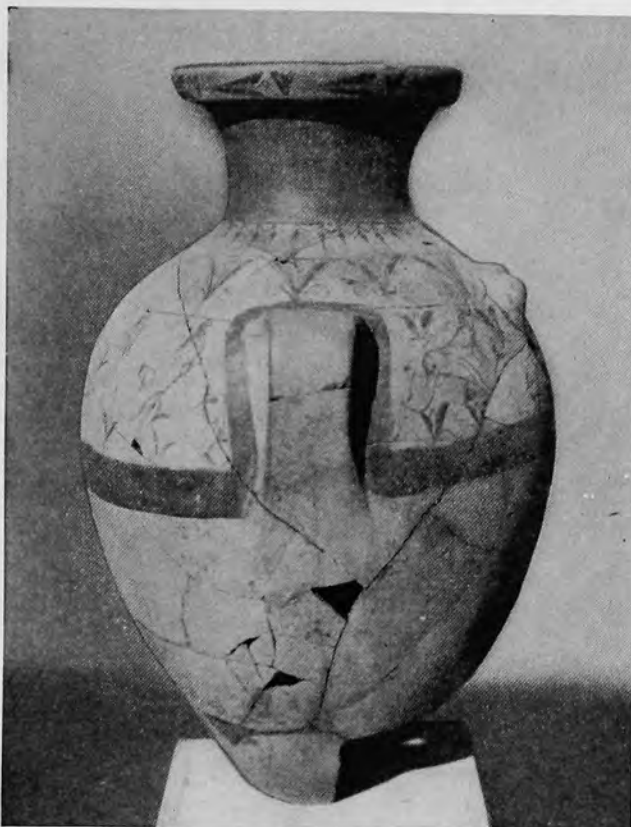


FIG. 227.—DECORATED JAR NO. 184. LATE PERIOD III

#### MIDDLE

No. 3239 (PLATE I), PLOT 47, DEPTH 1.70.—Pitcher .107 high; .141 high including handle; diameter of bottom .04, of body .099, of rim .111; thickness of bottom .004, of body .005, of neck .003. Small flat bottom, low rounded body, and high expanding neck. Rim tapers, but not quite to a sharp edge. High handle curves upward from body, returning as a continuation of neck wall. At its top are two "button" protuberances. Whole handle may be derived from an animal head on a long neck.

Paste fine, brown, with light buff slip. Decoration, painted in dark brown, consists of a single broad band around body and a fret pattern around neck between double line



borders. The roughly rectangular divisions formed by the fret are each filled with three "ladders" separated by wavy lines. Exterior is smooth; interior shows wheel marks.

Found by the citadel wall in company with decorated pot No. 3237 and plain vessels Nos. 3238 (p. 262) and 3240.

No. 790 (PLATE II), PLOT 30, DEPTH .70.—Jar .248 high; diameter of body .252, of rim .236; thickness of bottom, body, and neck .007. Flat-bottomed; body bowl-shaped



FIG. 228.—CUP No. 3104 (IN CENTER), AS FOUND

below, recurved above to form a broad, almost cylindrical neck. Rim flaring, with offset inside and rounded edge. Two opposite handles of "double-button" type extend from point of greatest width to middle of neck. Below "buttons" they are round in cross-section; toward neck they broaden.

Paste medium, light buff, with light buff slip on which decoration is painted in dark brown. Both paint and slip are in places discolored to gray by fire. Decoration begins at base of handles with a zone of cross-hatched triangles on both sides of a zigzag line

encircling upper part of body. Neck is covered with a continuous fret pattern formed partly of solid lines and partly of outlines filled with dots and subdivided here and there into squares and rectangles. Above each handle and on each "button" is an X. Handles bear line decorations. Exterior is smooth, interior somewhat rougher. Some striations inside of rim suggest wheel marks.

Found on hard-tramped floor just inside Period III citadel wall. Most of the fragments were blackened by a violent fire which had affected similarly even the fallen rocks. A decorated bowl (No. 802) lying near by was in the same condition. Other decorated vessels likewise found just inside the wall are Nos. 3237 and 3239 (p. 257) from Plot 47 and Nos. 3241, 3243 (below), and 3244 from Plot 53. Bullae (Nos. 3099-3100) bearing hieroglyphic inscriptions were found associated with the citadel wall in Plots 58 and 60. They are probably of the same period as these decorated vessels.

No. 3243 (PLATE III), PLOT 53, DEPTH 2.50.—Jar .278 high; diameter of bottom .10, of body .28, of rim about .18; thickness of bottom .004, of body .006-.008, of neck .006. Ring bottom. Lower body expands gradually; upper body is recurved at an angle with it. Short cylindrical neck bears an expanded rim with offset inside as in No. 790 (above). Opposite each other on upper body are two short, round handles (same type again on No. 3241).



FIG. 229. BOTTOM OF CUP NO. 3104. EARLY PERIOD III

Paste medium; gray at center, outer third reddish. Light buff slip outside and on inside of rim. Decoration in very dark brown. As with Nos. 790 (above) and 3241, a violent fire has discolored much of the surface. Decoration appears on upper body, neck, rim, and handles. Unit of conventionalized design on body is a stag(?) with a tree before him and concentric rings filling interstices. This design occurs four times, once with tree omitted. Animal's snout is elongated like a bird's beak, and his horns are sketched just like the branches on the tree. Three scalloped lines attached to plain lines separate body design from that on neck. Latter consists of inverted arches containing concentric rings. Handles bear line decorations; above each handle stands an X. Part of a wavy line is visible on inside of rim. Interior shows wheel marks.

Found *in situ* in a room just inside the citadel wall, associated with similar vessels Nos. 3241 and 3244.

No. 3284 (PLATE IV), PLOT 58, DEPTH 3.20.—Jar .339 high; diameter of body .345, of rim .347; thickness of bottom, body, and neck .01. Flat-bottomed, larger part missing. Body more than semiglobular, with short neck curving slightly outward to expanded rim. Latter is quasi-triangular in cross-section, with a slight ledge inside. Two short, flat handles extend from lower neck to upper body.

Paste medium; reddish buff, with gray core at bottom. Buff slip bears decoration

in dark brown, discolored to gray in spots by fire. Same parts decorated as on No. 3243 (above). Designs on upper body and neck are in two sections, divided by handles. Horizontal lines bound and separate the body and neck portions of each. The body portions contain vertical and diagonal lines, hatched lunettes, a tree(?), peculiar animal(?) forms, etc.; some details are filled with dots. Neck designs are of scalloped lines dropping from single upper to triple lower border. On handles and rim are some cross-lines, those on rim being painted on both sides of broader bands. Above each handle again an X occurs. Interior shows wheel marks.

Found just inside citadel wall, as were the preceding specimens. A small decorated pitcher (No. 3266) was somewhat below the level of this vessel in this plot.



FIG. 230.—CUPS NOS. 3104 AND 353. EARLY PERIOD III

#### EARLY

No. 3104 (FIGS. 228-30), PLOT IX, DEPTH 1.30.—Cup .052 high; diameter of bottom .021, of body .093, of rim .09; thickness of bottom .008, of body .005. Bottom in form of a truncated cone; upper body slightly recurved; lip curving a trifle outward, with rounded edge. A high handle, now missing, was attached at lip and at broadest point of body. At latter level also are three rounded protuberances.

Paste medium, grayish white; smooth surface. Decorations, in dark brown, consist of four bands of four or five lines each crossing on lower body outside of flattened base, a simple lozenge pattern framed by groups of horizontal lines around upper body, and two solid bands of color, one outside and one inside, encircling the rim. Apparently handmade.

Found almost above an urn burial of Period I in a layer where yellowish brown, grainy sherds of Period II and painted sherds of Period III were mingled.

No. 353 (FIG. 230), PLOT 17, DEPTH .60.—Cup fragment .055 high; diameter of body .087(?), of rim .08; thickness of bottom .009, of body .006. Part of a cup with pointed bottom, roughly conical body contracted above, then expanding to rounded lip. High handle, as in No. 3104 (above), is lost.

Paste medium, containing rock particles. Both inside and outside are coated with a light buff or almost grayish white slip. Black bands form the decoration. Of three horizontal bands on upper half of cup, the medial and lowest are connected by broad

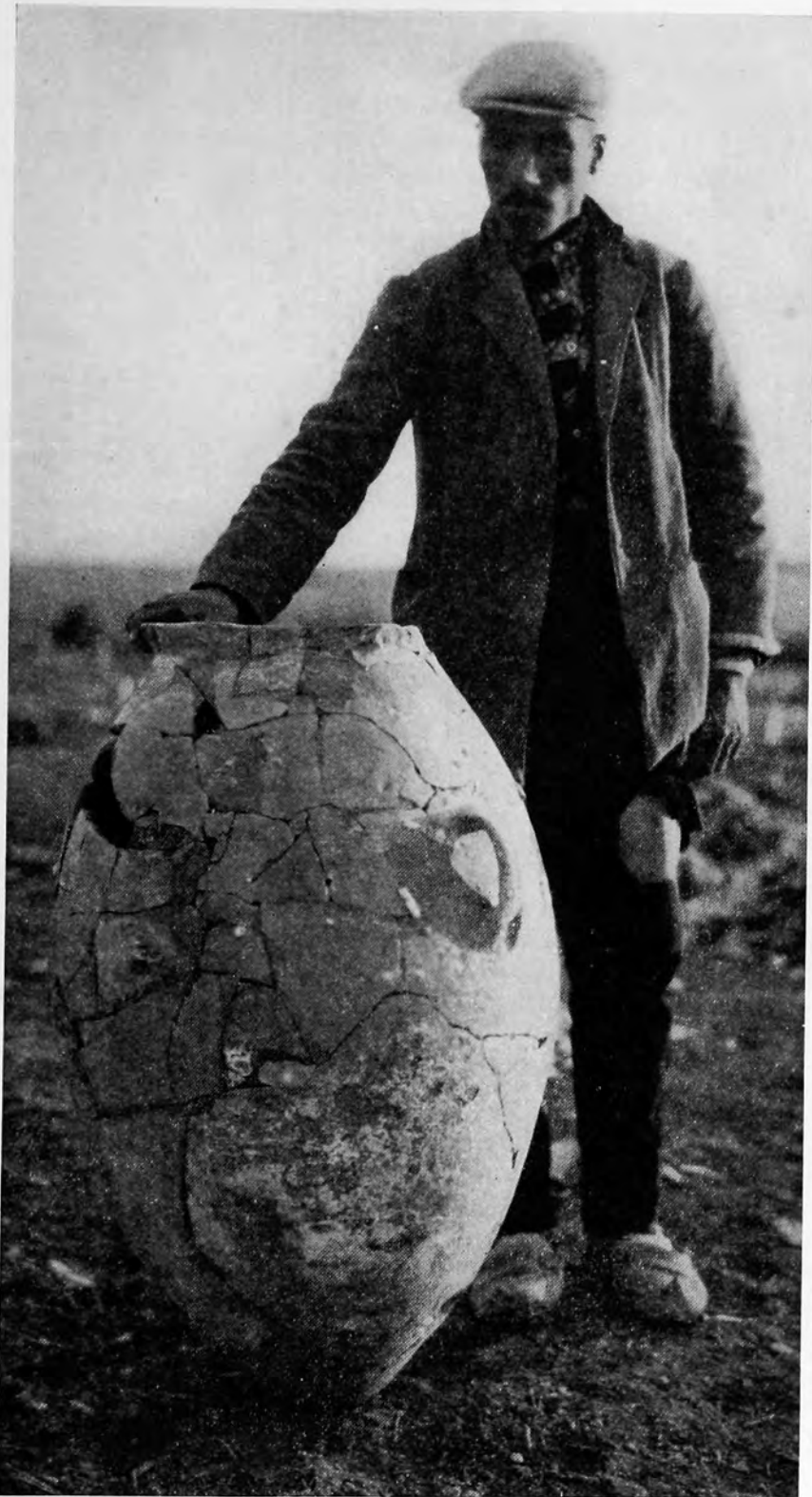


FIG. 231.—LARGE JAR NO. 3238. PERIOD III



bands and oblique lines. The lowest band is also met by pairs (originally four?) of bands which extend upward from contacts just above pointed bottom. Another band is inside of rim.

Found .15 below upper edge of the *kerpich* defense wall. Pre-Roman buff sherds were frequent in the vicinity. No. 3104 (p. 260) is the only similar vessel yet discovered. Sherds of the same technique and type of decoration occurred usually in the lowest levels of Period III.

No. 3227 (PLATE I), PLOT 44, DEPTH 2.00.—Cup .072 high; diameter of bottom .032, of body .098, of rim .089; thickness of bottom .005, of body .005-.006, of neck

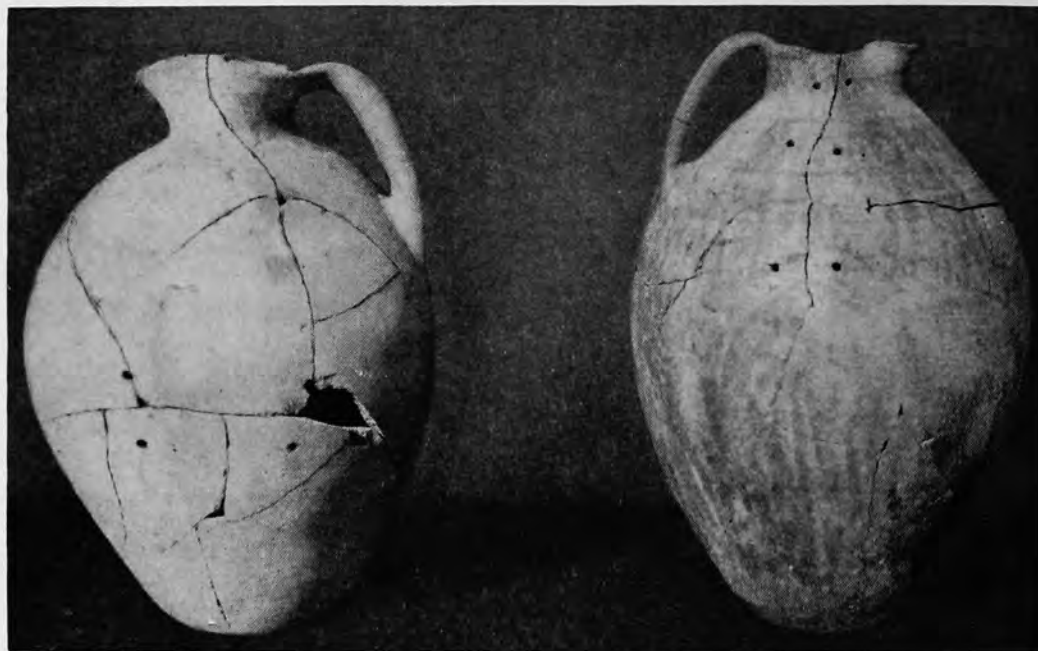


FIG. 232.—PITCHERS Nos. 449-50. PERIOD III

.004. Handleless, with low ring bottom. Body shaped in general like No. 3104 (p. 260), but higher. Rounded lip curves outward.

Paste medium, brown. Decorated in purplish brown-red on a polished red slip. A band of lozenges around middle of body is bordered by two lines above and three below. Another line is painted on the lip. Bottom inside is light brown, without slip. No wheel marks are visible.

The room which contained this bowl lay outside and apparently below the level of the Period III citadel wall.

#### PERIOD III PLAIN WARE

No. 3238 (FIG. 231), PLOT 47, DEPTH 1.70.—Large jar .95 high; diameter of body .63, of rim .365; thickness of body .014-.017. Pointed bottom, oval body, broad (.055)

flat rim expanded outward (mostly lost). Four flat handles, their upper ends .21 below rim, had each at lower end a deep impression of a finger tip.

Paste medium fine, with gray core and brown margins. Exterior is coated with smooth light brown slip, chipped off in many places. Many old holes are present, some filled with lead wire .007-.009 thick, by which cracks were repaired. Wheel marks are visible.

Found in company with such decorated vessels as No. 3239 (p. 257).



FIG. 233.—PITCHERS NOS. 449-50, AS FOUND

No. 449 (FIGS. 232 AND 233), PLOT 21, DEPTH 1.80 BELOW WALL EDGE.—Pitcher .389 high; diameter of bottom .136, of body .29, of rim .115-.127; thickness of body .009, of neck .008. Flat bottom, oval body (largest above middle), small neck, and trefoil-shaped orifice with rounded lip. One handle with elliptical cross-section extends from shoulder to rim between two lobes of orifice.

Paste medium, light buff, with stone particles. Light buff slip, almost grayish white, inside and out. Wheel marks on inside of rim. Fourteen repair holes .006 wide are equally distributed on both sides of an old fracture.

Found *in situ* with vessels Nos. 450-53 on the floor of a room. Many Period III painted buff sherds were found in the vicinity, as well as an iron arrowhead (No. 442) and other objects of iron and bronze; but no Roman objects appeared here.

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No. 450 (FIGS. 232 AND 233), PLOT 21, DEPTH 1.80 BELOW WALL EDGE.—Pitcher .398 high; diameter of bottom .121, of body .28, of rim .096-.114(?); thickness of body .007, of neck .009. Similar to No. 449 (p. 263). Handle flatter, with impression of a finger tip at lower end.

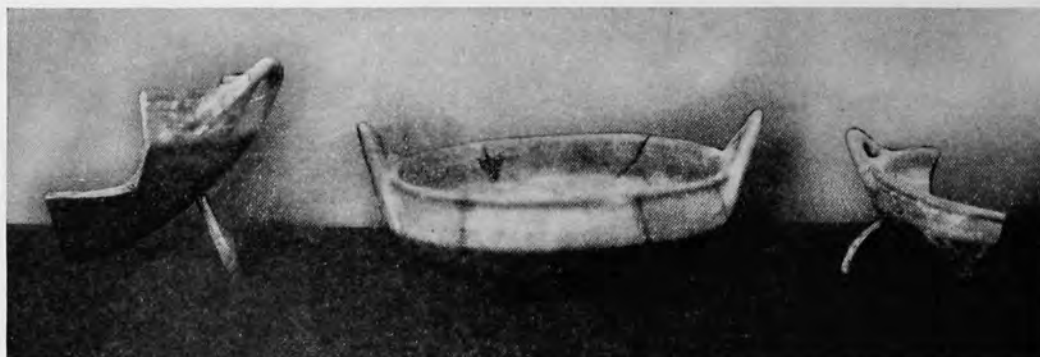


FIG. 234.—BOWLS NOS. 1527*a*, 1411, AND 1527*b*. PERIOD II

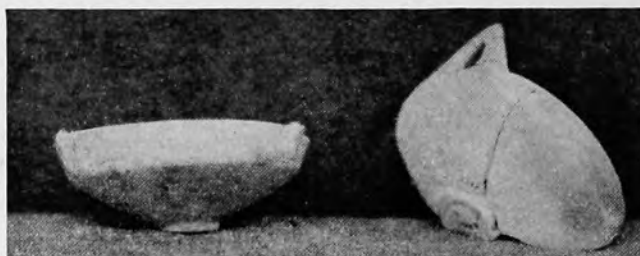


FIG. 235.—BOWLS NOS. 3274 AND 3248. PERIOD II



FIG. 236.—BOWLS NOS. 1652, 1626, AND 1650. PERIOD II

Paste as in No. 449. Slip varies from red-brown to gray and light buff. Wheel marks show on interior. There are several repair holes.

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## PERIOD II BOWLS

No. 1411 (FIG. 234), PLOT II, PIT 18.—Bowl .093+ high; diameter of body .268, of rim .261; thickness of body .008-.009. From missing bottom the lower body spreads with sides almost straight. Upper body forms a sharp angle with it. Rim curves slightly outward again with rounded edge. The two flattened triangular handles, on opposite sides of upper body, are characteristic of Period II ware. They extend .041 above rim, are bent slightly outward, and have an opening wide enough for only one finger.

Paste medium, brown. Apparently a yellowish brown wash containing much mica had been applied on both sides. Inside is rather smooth, while outside has the grainy feel and appearance of typical wares of the period. Wheel marks appear outside and on inside of rim.

Many sherds and other objects of Period II were uncovered in the vicinity, but in all of Plot II only a few scattered sherds of Period III were found.



FIG. 237.—BOWL No. 3134. PERIOD II



FIG. 238.—BOWLS Nos. 2303, 3148, 3257, AND 3247. PERIOD II



FIG. 239.—CUPS Nos. 3251 AND 2896. PERIOD II

No. 1527*a* (FIG. 234), PLOT IV, PIT 15.—Bowl fragment .127 high; diameter of bottom .063; thickness of bottom .005, of body .007. Small, flat bottom. Body shaped like No. 1411 (above). Rim plain, rounded. Handles (only one survives) rounded triangular, a little more tipped than those of No. 1411.

Paste medium; gray-brown at core, with light brown surfaces on both of which much mica shows. Wheel marks are visible on inside.

No. 1527*b* (FIG. 234), PLOT IV, PIT 15.—Bowl fragment .084 high; thickness of body .006. Bottom lost. Body similar to No. 1527*a* (above), but upper part here not as



high. Rim almost round in cross-section. Surviving handle like that of No. 1527*a*, but less rounded.

Paste medium; gray core; light brown surface shows mica all over. Red wash on upper body, rim, and handle. Wheel marks present.

No. 3248 (FIG. 235), PLOT V, DEPTH 1.40.—Fragmentary bowl .071 high; diameter of bottom .054, of body .202+, of rim .191+; thickness of bottom .008, of body .006-.007. Ring bottom. Body and preserved handle as in No. 1411 (p. 265). Rim plain, somewhat tapering, with rounded edge.



FIG. 240.—JARS NOS. 3252-53, AS FOUND

Paste medium; grayish black core; surfaces yellowish brown or light brown, grainy. Upper body and handle were coated with a red wash, much of which has disappeared. Faint wheel marks are visible.

No. 3274 (FIG. 235), PLOT XXV, DEPTH 4.40.—Bowl .075 high; diameter of bottom .043-.047, of body and rim .174; thickness of bottom .013, of body .005-.01. Ring bottom. Body shaped in general like No. 1411 (p. 265), but with slightly rounded, almost cylindrical upper body. Rim plain, with rounded edge. Handles broken off.

Paste medium; gray-black core, light brown margins. Entire surface is covered with a reddish brown wash. Exterior is grainy, interior somewhat smoother. Former shows

little or no powdered mica; but there is much on interior, which has also a somewhat golden luster. Wheel marks are distinct inside and on upper part of outside.

No. 1626 (FIG. 236), PLOT V, PIT 12.—Bowl .078 high; diameter of rim .17; thickness of bottom .01, of body .006. Bottom pressed into pointed form, probably by a



FIG. 241.—JARS NOS. 3252-53. PERIOD II

wooden paddle or stick, as indicated by faint striations on the broad smoothed areas. Body suggests an inverted cone, except that sides are slightly rounded. Rim curves inward with rounded edge and makes a slight angle inside. No handles.

Paste medium. Gray core; surfaces yellowish brown, grainy. Wheel marks show on upper part outside, and with especial distinctness on inside.

This form proved as typical of Period II as did that of No. 1411 (p. 265).

No. 1650 (FIG. 236), PLOT V, PIT 18.—Bowl .069 high; diameter of rim .172; thickness of bottom .005, of body .004–.006. Similar to No. 1626 (above), but with bottom slightly rounded.

Paste as before, but surfaces brownish, not quite so bright.

No. 3134 (FIG. 237), PLOT XIV, DEPTH 4.30.—Bowl .074 high; diameter of rim .163; thickness of bottom .01, of body .006. Similar to No. 1626 (p. 267), but rim is flattened and slopes inward.

Paste medium; dark gray core, reddish brown surfaces.

No. 2303 (FIG. 238), PLOT XIII, DEPTH 2.80.—Bowl .055 high; diameter of rim .144; thickness of bottom and body .006. Rounded sides and bottom. Upper body straightens to vertical; rim tapers almost to a sharp edge.



FIG. 242.—VESSELS NOS. 3115, 3265, AND 1460. PERIOD II

Paste medium; grayish black core, light or yellowish brown surfaces. Pinkish wash on upper exterior, which is the only grainy part. Some powdered mica on surface. Wheel marks inside and above on outside.

No. 3148 (FIG. 238), PLOT XV (EAST), DEPTH 5.00.—Bowl .067 high; diameter of rim .18; thickness of bottom .012, of body .008–.009. Like No. 1626 (p. 267), but with bottom not quite so rounded and with plain, rounded rim.

Paste medium; grayish black core, surface color light gray to light brown.

In this plot pottery of Period II was found from a depth of about 3.00 to the original surface at 6.00.

No. 3257 (FIG. 238), PLOT XIV, DEPTH 4.50.—Bowl .066 high; diameter of rim .153–.166; thickness of bottom .013, of body .006–.008. Like No. 1626 (p. 267), but round-edged rim is flattened on inside.

Paste medium. Grayish black core; surfaces light gray, grainy, with no mica.

Depth of deposit in this plot same as in Plot XV mentioned above.

No. 1652 (FIG. 236), PLOT II, DEPTH 1.00–1.50.—Fragmentary bowl .056 high; diameter of bottom .036, of rim .155; thickness of bottom .003, of body .004–.005. Small, flat bottom. Body as in Nos. 1626 and 1650 (above). Rim flat.

Paste medium fine, light brown. Surface light to yellowish brown, grainy, with much mica. Wheel marks inside and on upper part outside.

No. 3247 (FIG. 238), PLOT V, DEPTH 1.40.—Fragmentary bowl .04 high; diameter of bottom .022, of rim about .155; thickness of bottom and body .004. Very shallow, with tiny ring bottom. Body rounded. Rim plain, somewhat tapering, with rounded edge.

Paste medium fine. Core light gray, surfaces brown. Both sides seem coated with a light brown, almost yellowish brown, wash or slip with golden luster. Latter may be due to abundance of mica. Probably wheelmade, though no marks are visible.

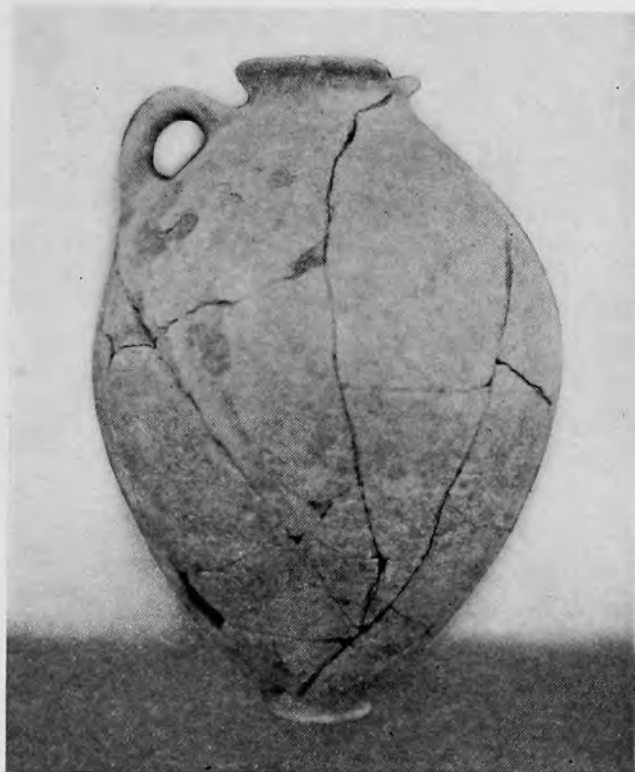


FIG. 243.—JUG No. 3282. PERIOD II

This bowl is not like either of the typical forms above. But sherds of such "golden ware" and of a similar "silver ware" were found associated with types of Period II only.

#### PERIOD II CUPS

No. 3251 (FIG. 239), PLOT XII, DEPTH 3.80.—Cup .039 high; .051 high with handle; diameter of rim .074; thickness of bottom .007, of body .003. Pointed bottom. Lower body rounded, upper more vertical. Rim slightly expanded, rounded on top but forming a sharp edge on outside. High oval handle.



Paste medium to fine; light brown. Fine wheel marks inside. Outside smooth, coated with brown wash or slip.

Found at a level where Period I and Period II objects were mingled. Wheel marks link it with latter.

NO. 2896 (FIG. 239), PLOT XXV, DEPTH 2.50.—Cup .043 high; .056 high with handle; diameter of rim about .068; thickness of bottom .004, of body .003. Similar to No. 3251 (p. 269), but upper body somewhat more contracted and handle more circular.

Paste medium to fine; light brown, with core gray in places. Surface yellowish brown, grainy, with some mica. Wheel marks inside and on upper part outside.

Though this cup and No. 3251 are so nearly alike, the one was found near the top of the Period II layer, the other near the bottom.

#### PERIOD II JARS, JUGS, AND PITCHERS

NO. 3252 (FIGS. 240 AND 241), PLOT XII, DEPTH 3.20.—Jar .565 high; diameter of bottom .065, of body .38, of rim .41; thickness of body .008, of neck .01. Flattened point-bottom. Body expands to about half the height; upper part is almost cylindrical. Rim forms a collar on outside, shows a narrow ledge on inside. Two opposite handles with oblong cross-section are attached just above center.

Paste medium; gray core, reddish toward surfaces. Exterior light brown, smooth, with faint marks of a rubber. Wheel marks prominent inside.

Typical Period II sherds, etc., were associated with Nos. 3252-53.

NO. 3253 (FIGS. 240 AND 241), PLOT XII, DEPTH 3.20.—Neck of a large jug, .285 high; diameter of rim .106; thickness of body .011, of neck .013. Apparently body was oval. Rolled rim. Single handle with oblong cross-section extends from shoulder to neck.

Paste and exterior as in No. 3252 (above). Interior gray, with distinct wheel marks. Found right beside No. 3252.

NO. 1460 (FIG. 242), PLOT III, DEPTH 1.00-2.00.—Neck of a jug .126+ high; diameter of rim .058; thickness of neck .006-.007. Body lost. Rim is round, with edge rounded outward. The one handle extends from just below rim to shoulder.

Paste medium; light gray core, with yellowish brown, grainy surface. Wheel marks inside and out.

Objects taken from this plot were mostly of Period II.

NO. 3282 (FIG. 243), PLOT XXV, DEPTH 1.50.—Jug .38 high; diameter of bottom .063, of body .283, of rim .115; thickness of bottom .008-.01, of body .007, of neck .01. Small ring bottom. Body oval; neck contracted, very short. Expanded rim has rounded lip. The short, roundish handle, oblong in cross-section, is attached to upper body just below neck and does not reach as high as lip.

Paste medium; gray to grayish black core, with surface yellowish brown but not as grainy as usual. Wash or slip contains much powdered mica. Rubber has left vertical striations. Wheel marks are distinct inside and on outside of rim.

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Paste, surface treatment, and associated objects agree in establishing date as Period II.

No. 3265 (FIG. 242), PLOT XXII, DEPTH 2.20.—Jug .156+ high; diameter of body .168, of rim .10; thickness of body .007-.009, of neck .008. Bottom lacking. Body almost globular, with short cylindrical neck and expanded rim. Latter shows an offset forming a ledge inside. Lip almost sharp. Handle extends from just under rim to shoulder.

Paste medium; grayish black core with yellowish brown or light brown surfaces. Neck grainy, body rather smooth, some mica on exterior. Wheel marks on neck and interior.

Paste and surface suggest Period II, though form is somewhat unusual.

No. 3149 (FIG. 244), PLOT XV (EAST),  
DEPTH 5.90.—Pitcher .092 high; diameter



FIG. 244.—PITCHER No. 3149.  
PERIOD II



FIG. 245.—PITCHER No. 3279.  
PERIOD II

of bottom .035, of body .103, of rim .057; thickness of body .007-.009, of neck .004. Tubular spout. Crude ring bottom. Body is most expanded below middle, with rather straight diverging lines below and an incurve above plane of maximum diameter. On contracted upper part rests a short cylindrical neck. Rim rounds outward, forming somewhat of a lateral edge. The handle is lost, as is most of the spout which projects opposite to it. The spout has a diameter of .018 outside and .007 inside and is .021 below the lip.

Paste medium; gray. Exterior surface crudely wrought; wheel marks on upper body.

Wheel marks and associations determine date. Except for a few Period I sherds, only objects of Period II were uncovered in this plot below 3.00. Surface and paste fail as criteria, and a spout is most frequent on the handmade vessels of Period I.

No. 3279 (FIG. 245), PLOT XIX, DEPTH 2.10.—Pitcher .127 high; diameter of bot-

tom .026, of body .088, of rim .031-.039; thickness of body .006. Round bottom flattened just enough to keep it in balance. Body globular; neck very short, with elongated bill-spout. Rim has rounded edge. Round handle curves somewhat above level of rim.

Paste medium fine; grayish black. Since the whole vessel is blackened by fire, original color of surface cannot be determined. Surface smooth; no wheel marks visible.

This shape in general and the bill-spout in particular much resemble Period II forms. In the layer where this vessel was found, sherds of Periods II and I were mingled.

No. 3155 (PLATE V AND FIGS. 246-47), PLOT XVII, DEPTH 2.70.—Pitcher .18 high; diameter of body .12, of rim .044-.061; thickness of body .004-.005. Rounded point-bottom. Body oval, passing directly into the elongated, cut-off bill-spout. This tapers somewhat toward its rounded lip. Round high handle rises from base of spout to about half its height, rejoining vessel at shoulder.

Paste medium fine; light brown. Surface yellowish brown, grainy, with much powdered mica giving a somewhat golden luster. Wheel marks on interior.

Paste, surface, and form are typical of Period II. Nos. 3154 (below) and 3155 were mortuary gifts placed beside the skull of an old man.

No. 3154 (PLATE V AND FIGS. 246-47), PLOT XVII, DEPTH 2.70.—Pitcher .127 high; diameter of body .098, of rim .073; thickness of body .003, of neck .003-.005. Rounded point-bottom. Almost semiglobular lower body is separated from incurved upper body by a slight ridge. Neck, somewhat contracted, expands again toward trefoil-shaped orifice. Lip is rounded. Handle, slightly flattened, rises straight from shoulder, then curves inward with its high point just above level of rim, to which its upper end is attached.

Paste medium fine; light brown. Surface smooth, coated except at neck with a thin red wash containing an admixture of powdered mica. Wheel marks inside and on neck outside.

Though form is unusual for Period II, association with No. 3155 (above) leaves no doubt about date.

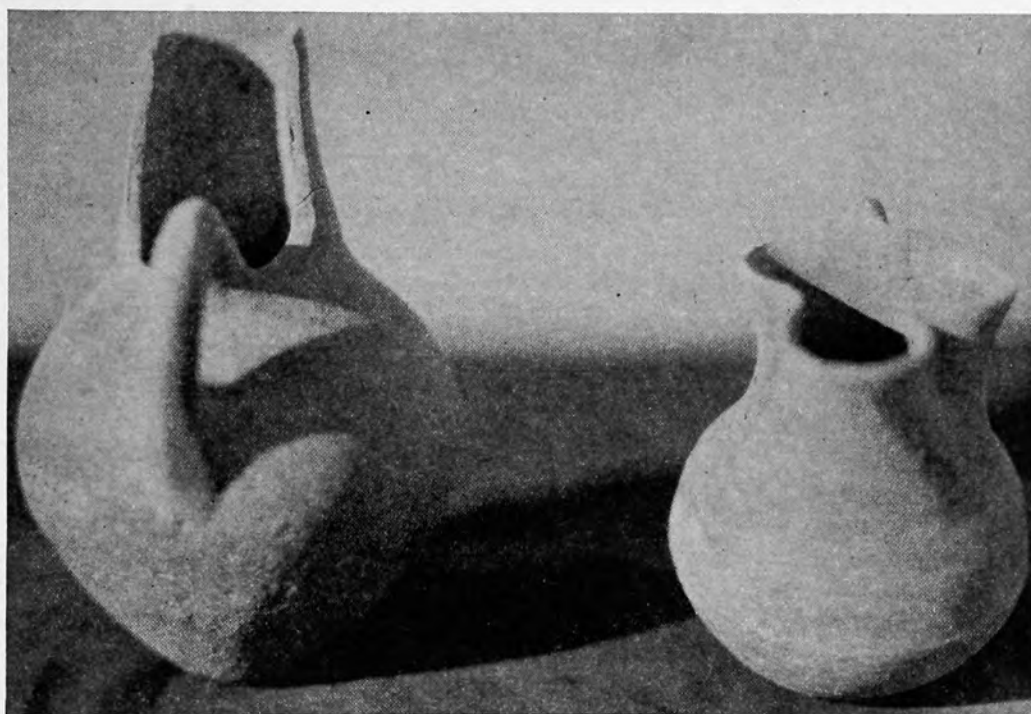
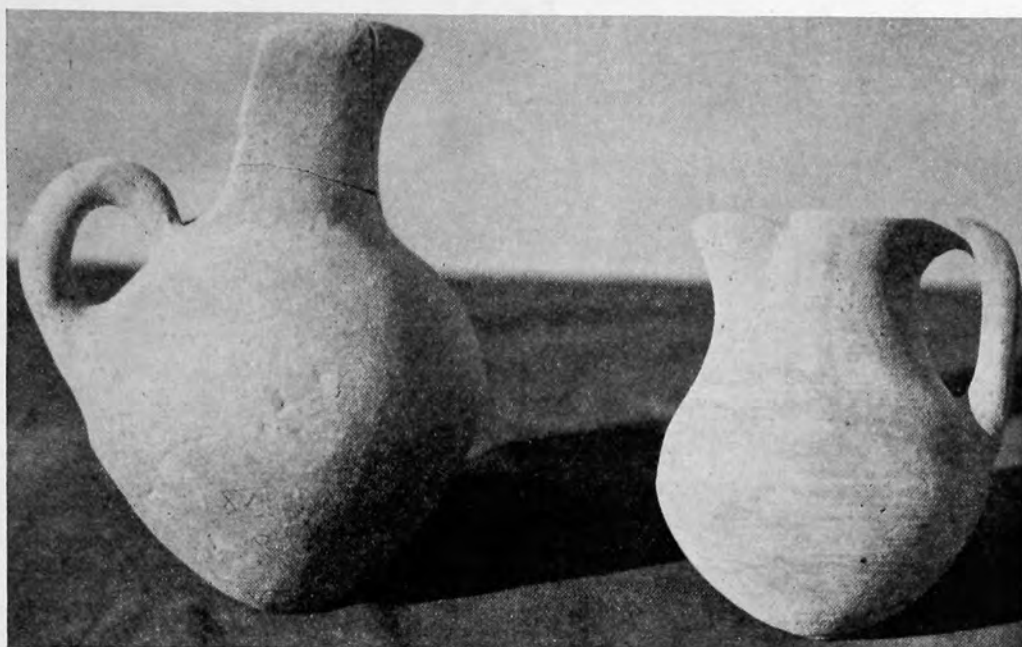
No. 3115 (FIG. 242), PLOT XII, DEPTH 2.50.—Neck of a pitcher .137+ high; diameter of neck .055; thickness of neck .011-.014. Neck is prolonged obliquely by a bill-spout with triangular offset at end. Spout is .115 long and reaches a width of .035. Handle and body are lost.

Paste medium; gray core with brown margins. Surface light brown with golden luster. Latter probably due to great quantity of powdered mica present in wash.

The layer where this was found contained mostly Period II objects.

No. 1412a (FIG. 248), PLOT II, DEPTH 1.00.—Fragmentary pitcher .212 high; diameter of body about .115; thickness of bottom .012, of body .005-.006, of neck .006. Pointed bottom and oval body. Half of the contracted neck is preserved. It expands above into a broad bill-spout. Rim tapers almost to a sharp edge. Handle lost.

Paste medium; grayish black core with light brown margins. Exterior is yellowish or grayish, grainy. Wheel marks inside; corrugations prominent in lower part.



FIGS. 246 AND 247.—PITCHERS NCS. 3155 AND 3154. PERIOD II



Associated with bowl No. 1411 (p. 265) and with Nos. 1412*b* and 1413 (below).

No. 1412*b* (FIG. 249), PLOT II, DEPTH 1.00.—Pitcher .207 high; diameter of body .125, of rim about .074; thickness of body .007-.008, of neck .005. Pointed bottom. Body is of irregular oval shape, crudely modeled. Spout is lost. Short round high handle extends from lip to upper body.



FIG. 248.—PITCHERS NOS. 1413, 1412*a*, AND 1590*a*. PERIOD II



FIG. 249.—PITCHERS NOS. 3249, 1412*b*, AND 3135. PERIOD II

Paste medium; gray core, light brown margins. Many vertical or oblique striations on the yellowish brown, grainy exterior. Some firing clouds. Prominent wheel marks inside; fine wheel marks on neck outside.

No. 1413 (FIG. 248), PLOT II, DEPTH 1.20.—Fragmentary pitcher .101 high; diameter of body .097, of rim about .085; thickness of bottom .007, of body .006, of neck .004. Roundish pointed bottom. Body oval; lip rounded; spout missing. Short round high handle (partly lost) extended from lip to upper body.

Paste medium; gray core, yellowish brown margins. Exterior yellowish brown, in places reddish brown, grainy. Fine wheel marks outside on rim; coarse ones inside.

No. 3249 (FIG. 249), PLOT V, PRt 6.—Pitcher .22+ high; diameter of body .152, of rim .07; thickness of bottom .019, of body .007, of neck .006. Pointed bottom. Roughly oval body is contracted above to a short, almost cylindrical neck (fragmentary). Short round high handle extends from lip to upper body. Rim near handle is flat. Spout is lacking.

Paste medium; gray core. Surface light brown, in places yellowish or reddish, grainy. Pressure used in pointing bottom has left vertical striations and flattened areas. Fine wheel marks outside on upper body and neck; coarse ones inside.

Though found at an inconsiderable depth, this pitcher has form and surface typical of Period II.

No. 1590a (FIG. 248), PLOT V, DEPTH



FIG. 250.—BOWL No. 1907. PERIOD I



FIG. 251.—PITCHER No. 3262. PERIOD I

UNCERTAIN.—Bottom of a pitcher .092+ high; thickness of bottom .022, of body .007. Bottom only, pointed like preceding.

Paste medium; gray core, light brown surface. Latter rather smooth, with some mica. Interior corrugated with wheel marks; a knob of clay at center of bottom still marks beginning of the work.

No. 3135 (FIG. 249), PLOT XIV, DEPTH 4.50.—Pitcher .229 high; diameter of body .145, of rim .062-.092+; thickness of body .008-.009, of neck .006. Pointed bottom, oval body, and very short straight neck (partly lost). Only a trace of broad bill-spout survives. Rim tapers to a rather thin edge. Short round high handle extends from lip to upper body.

Paste medium; light gray core, light brown at surfaces. Exterior in parts yellowish or reddish brown, grainy, with firing clouds. Fine wheel marks outside on upper body; coarse ones inside.

#### PERIOD I VESSELS

No. 1907 (FIG. 250), PLOT IX, DEPTH 3.80.—Bowl .079 high; diameter of bottom .041, of rim .17; thickness of bottom .005, of body .004. Handmade, fragmentary. Body almost hemispherical, with small flat bottom and very slightly indrawn rim with

rounded edge. A "boil" on the rim, .02 long and protruding .008, was produced by pressure with the finger tip while the clay was soft.

Paste medium; gray core, reddish margins. Surfaces bright red, polished. The rubber, presumably a stone, has left distinct striations. Those on outside roughly parallel the rim; on inside they radiate from bottom, except for a band about .015 broad around the rim.

In Plot IX no sherds except of Period I were noticed below 3.00, and even above that depth the typical red-slipped sherds occurred. The form of this bowl, the rim with its protuberance, and the surface treatment are clearly characteristic of Period I ware, though it is represented almost wholly by fragments.

No. 3262 (FIG. 251), PLOT XVIII, DEPTH 3.80.—Pitcher .065 high; diameter of bottom .021, of body .081, of rim .056; thickness of neck .003. Small, slightly concave bottom. Shallow convex lower body forms at half height an angle with concave upper body and neck. Rim has a slightly sharpened edge. Missing handle, extending from rim to shoulder, rose somewhat above level of mouth. On opposite side a tubular spout projecting from center of body points slightly upward. Spout is .016 long, .01–.017 broad, with an opening .005 wide.

Paste medium, reddish where visible. Exterior and rim inside are coated with a bright red slip. Polishing marks run parallel to rim. Rest of interior is light brown, covered in part by a grayish black deposit.

The pitcher was found in a deep Period I layer where the red-slipped type ware was exceedingly frequent. In the neighboring stratigraphic annex of Plot X the Period I layer extended from a depth of 1.85, 2 meters above the find-spot of this vessel, to the bottom of the culture deposit. The lateral tubular spout has been noted to date in Periods I and II only.

## ALPHABETIC INDEX AND GLOSSARY

The various sorts of finds and their periods, as far as described in this volume, have been summarized in the text but are not indexed. For building-remains and household equipment, see pages 68-72; for the fortifications, pages 195-213; for objects (other than pottery) from the test plot, pages 232-35; for datings in that plot, pages 240-41; for the pottery as a whole, pages 242-46.

Most of the foreign terms translated are Turkish. Arabic words are specifically so designated if they have not been adopted into Turkish also.

Many of our spellings of Turkish geographical names agree with those now adopted by the Turkish government. It has been possible to add a few important new spellings which vary from our former usage.

- Abujak (Akbuajak), 42  
 Abu Simbel, Egypt, 17  
 Achaean empire, 5  
 Aegean culture, 5  
 Aegean islands, 5  
 "Aḥḥijava," 5, 17  
 Airi Dagh, 27, 29, 50  
*aiva*, quince  
 Aivalü, 8, 10, 23, 64  
*aji*, bitterness  
 Aji Özü, 23  
*ak*, white  
 Akalan, 7, 9  
 Akbuajak, *see* Abujak  
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 Ak Dagh, 21, 26, 29, 31, 37, 49  
 Ak Dagh Maden (Akdağ Madeni), 20, 21  
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*araba*, wagon  
 Arabian Desert, 5  
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*ardich*, a kind of wood  
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*bagche*, garden  
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*bash*, head  
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*boya*, dye, color  
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 Bozuk, *see* Yozgad  
 Bozuk Chai (Sarai Su), 24, 27, 40, 41  
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*budak*, branch, twig  
 Budak Özü Chai, 25, 26  
*büyük*, big  
 Büyük Nefez Köi, 24  
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*bujak*, corner  
 Bulumashlü, 25  
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*chichek*, flower  
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*chiftlik*, farm  
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*chikrikche*, spinner  
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*chöl*, desert  
*chomak*, club  
  
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*dagħ* (*dağ*), mountain range  
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*deirmen*, water mill  
*delidje*, crazy  
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*dere*, valley, stream  
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*kaleh*, castle  
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*kara*, black  
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*kaya*, rock  
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*kechi*, goat  
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*kerpich*, mud brick  
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*khas*, goose  
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*kilinj*, sword  
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*koch*, male sheep  
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*köi*, village  
*köprü*, bridge  
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*kötü*, bad  
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*konak*, mansion; home  
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*koyun*, sheep  
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*küçük*, small  
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*kül*, ashes  
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*küşla*, armory; winter quarters  
*küzül*, red  
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*özü*, valley, stream  
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