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1932/33

THIRD PRELIMINARY REPORT

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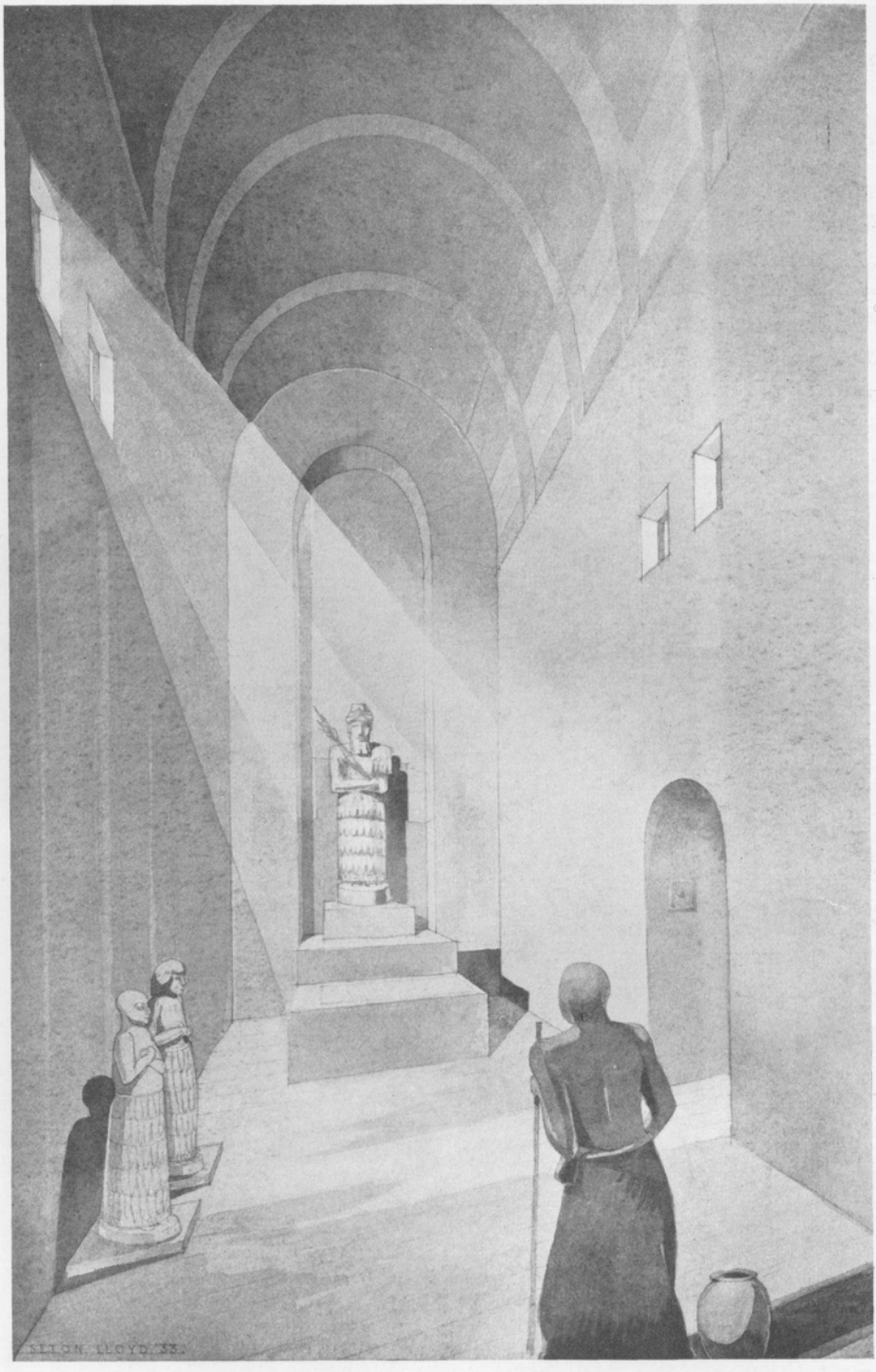
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IRAQ EXCAVATIONS OF THE ORIENTAL INSTITUTE 1932/33

THIRD PRELIMINARY REPORT OF THE IRAQ EXPEDITION

By
HENRI FRANKFORT

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FOREWORD

During the season of 1932/33 the work of the Iraq Expedition of the Oriental Institute reached the full scope anticipated for it under its present organization. On the three main sites—Tell Asmar, Khafaje, and Khorsabad —excavations were begun simultaneously in the middle of November and continued until the middle of March, when dust storms made further work in the south impracticable. Temporary permits were then obtained for two sites, Tepe Shenshi and Jerwan, both within easy reach of Khorsabad. Thus the entire staff was thereafter occupied in the north until the third week in April.

It may be useful to insert here a few words on the climate of the desert in which Tell Asmar and Khafaje are situated, since it decisively influences the length of our season in the south. Dust storms prevail throughout the summer; and when the winter rains come late, as they did this year, we are even hampered at the beginning of the winter season. Thus part of the staff was delayed for two days while en route to Baghdad by air, arriving in camp on November 17 after experiencing a forced landing. On November 26, and even as late as December 13, dust storms made work after 10:00 A.M. impossible. During the winter there was abnormally little rain, so that the storms began again early in the spring, and a particularly dense one literally overshadowed the last day of Dr. Breasted's stay with us, which was March 2.

Work was allotted to the staff as follows. At Tell Asmar two adjoining parts of the site were investigated simultaneously, one by Dr. Jacobsen and the other by Mr. Lloyd. Dr. Jacobsen was assisted by Mr. Harold D. Hill, of Harvard Architectural School; and Mr. Lloyd, by Count Alexander zu Eltz, of Professor Strzygowski's Institute for the History of Art in Vienna. Miss G. Rachel Levy acted again as recorder; Mrs. Jacobsen, as photographer; and Miss M. A. Chubb, formerly of the Egypt Exploration Society, was engaged as secretary to succeed Miss Van Scherpenberg.

At Khafaje Mr. Delougaz was again in charge, assisted, as in former years, by Mr. Darby; Dr. Debevoise had been transferred to

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the Oriental Institute's Syrian Expedition, and his place was taken by Dr. C. W. McEwan, who had formerly been on the staff of the Anatolian Expedition. Mrs. McEwan gave invaluable help in recording, besides running the house at Khafaje, where at least one member of the staff remained each night.

The work at Khorsabad was again in the hands of Mr. Loud, assisted by Mr. F. L. W. Richardson, Jr., who had been with Mr. Woolley at Ur in the previous season. In the early days of March Mr. Richardson undertook a geological tour which aimed at elucidating the formation of the Tigris-Euphrates delta. Our expedition contributed a sum to his expenses, since the solution of this geological problem has a distinct bearing on our insight into the early history of Mesopotamia. The question of whether the proved intercourse with India and the supposed intercourse with Egypt was brought about by seagoing ships docking in the Sumerian cities or, alternatively, was carried out by intermediaries—perhaps living along the west coast of the Persian Gulf and trading with Sumer overland—can be answered only when we know whether the "bar" at Basrah already in the earliest times separated Eridu and the other early towns from the Persian Gulf.

After Mr. Richardson's departure Mr. Darby and Count zu Eltz assisted Mr. Loud, while Mr. Delougaz, assisted by Mr. Hill and Dr. McEwan, excavated Tepe Shenshi. At the same time Mr. Lloyd and Dr. and Mrs. Jacobsen worked at Jerwan in the hills farther to the north, living in the village of Ain Sifni in a house which we rented for a month with the kind assistance of the local authorities.

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I

TELL ASMAR: PRIVATE HOUSES

In our last report[1] we described how investigations carried out at the beginning of the previous season had led to the discovery that the northern hills of Tell Asmar had not been inhabited to any extent in the Larsa period or later; and furthermore how a large building in the extreme north, and a group of private houses a little south of it, had been partially uncovered. It was here therefore that we concentrated our efforts during the winter of 1932/33; for the extremely unusual circumstance that this part of Eshnunna had been unoccupied since the middle of the 3d millennium B.C. offered an excellent opportunity for the investigation of a problem which has been exercising the minds of archeologists ever since Mr. Woolley first discovered at Ur the magnificent tomb furniture now adorning the Baghdad Museum, the British Museum, and the University of Pennsylvania Museum.

It is generally agreed that these objects belong to an early period of Babylonian history. Since, however, the first epoch of which we have historical knowledge, that of King Sargon of Akkad (about 2500 B.C.) and his great successor Naramsin, is at the same time the earliest of which we possess highly artistic material remains, and since slightly earlier monuments show resemblances to those from Ur, a number of scholars have assigned the finds from Ur to the Sargonid epoch or to the centuries immediately preceding it, while Mr. Woolley himself dates them not less than a thousand years earlier (3500 B.C.). Other authorities favor intermediate dates. The issue affects the vital question whether Babylonia, before the arrival of the earliest Semitic invaders of whom we have records, had reached a stage of material civilization on a par with the best achieved in later ages. Furthermore, if Mr. Woolley's dating should prove correct, Babylonia would gain a considerable priority over Egypt, where, according to the latest research, the early dynastic period can hardly be put before 3000 B.C.

It may perhaps seem strange that these problems should have

[1] *Tell Asmar, Khafaje, and Khorsabad* ("Oriental Institute Communications," No. 16 [Chicago, 1933]); hereafter abbreviated to *OIC* No. 16.

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presented themselves to us as soon as the age of the ruins in the northernmost hillocks of Tell Asmar had been established. But it must be repeated that only with the dynasty of Sargon does history based on written documents become available. In order therefore to distinguish an "earlier" and a "later" culture in the age which precedes Sargon, we are dependent on archeological data alone. The available evidence from Ur, as also from Kish, is derived from tombs; and these are somewhat inadequate where relative chronology is concerned, for, though the objects comprising the furniture of any one single tomb are certainly contemporaneous, their relation in time to other tomb groups can but rarely be defined precisely. It is true that comparative and statistical treatment of the contents of a very large number of tombs may lead to the establishment of a more or less reliable chronological sequence, but it often remains uncertain how much time is actually covered by such a series and whether it does not omit any important stage in the development of material civilization.

But now the interesting situation at Tell Asmar offered a new avenue of approach. Here we could investigate stratified deposits and, owing to the proximity of our buildings to the surface, were able to extend our excavations over a wide area and thereby safeguard ourselves against basing generalizations on isolated instances. Moreover, the height of these mounds suggested an occupation lasting through a considerable period. We might therefore hope to excavate a series of objects which would establish a chronological sequence and might thereupon be considered in conjunction with those from contemporary tombs. Thus we should bring the actual history of the settlement as written in the ruins to bear on the larger issues which the finds from Ur and Kish had raised.

During the past season we attained the first stage in carrying out this project. With a watchful eye on the interrelations of the ruins, we penetrated the mounds. First came the scanty remains of a few isolated houses which were built here in the Larsa period (Strata I and II). Underneath, in Stratum III, was at least one complete house built in the early years of the 3d dynasty of Ur, or perhaps dating back to the dark period of Gutium rule. Deeper in the hill again we found a stratum dated by inscribed tablets and cylinder seals to the dynasty of Akkad (Fig. 1). Here we could clearly distinguish two

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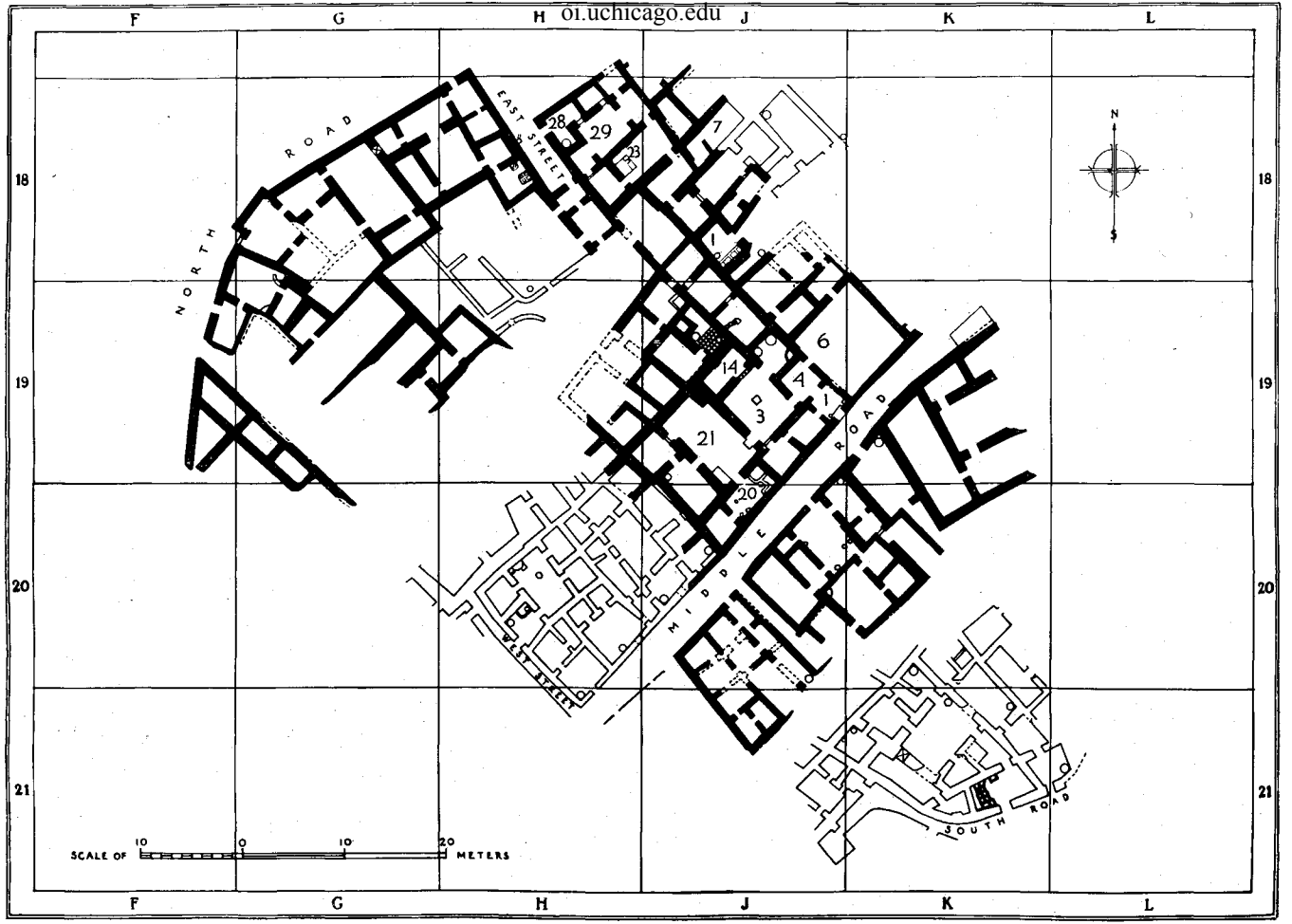


FIG. 1.—Plan of house area in Strata IV and V

Solid black	Stratum IV*a*	Akkadian, later half
Outlined	Stratum IV*b*	Akkadian, earlier half
	Stratum V	early dynastic

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periods, IV*a* and IV*b*, the latter showing the first Akkadian layout of the houses and the former the changes and wholesale reconstructions carried out in the course of the 196 years that the dynasty held sway. Stratum V, the deepest reached so far, brought us into the early dynastic period, to which the tombs of Ur belong. This was shown not only by the objects found in this stratum, but also by the use of plano-convex bricks, which here made their appearance.

At this point it is clear that we are not yet in a position to solve the larger problem mentioned above. We have found the transition from the early dynastic to the Sargonid period. But we do not know how deep the buildings of plano-convex bricks, which belong to the early dynastic period, extend below our Stratum V. Only when we have penetrated as far as the lower limit of the early dynastic period, so that we can judge at which stage in its development the so-called "royal tombs" of Ur have to be placed, can we successfully attempt to assign to its proper context the splendid material culture which they have revealed.

Something, however, may already be said about the relationship between the early dynastic and the succeeding Sargonid period. It is extremely interesting to observe exactly how far the political changes of the time are reflected in the civilization as revealed by our discoveries. Most of the objects of daily use, such as the pottery and the cylinder seals, which we were able to attribute to the two periods, differ widely. But the tools and weapons present less of a contrast; and in the buildings the continuity of occupation is most striking. The course of North Road and Middle Road remained practically unchanged from early dynastic days down to the beginning of the 3d dynasty of Ur. Nowhere on the site are there signs of a general conflagration or other destruction which might mark the political transition. In this respect the private houses contrast significantly with the neighboring palace site. Not only the alignment of the houses, but also their general type, the plan upon which they were built, remained unchanged throughout. The latter circumstance certainly precludes the hypothesis that the institution of the Semitic dynasty of Sargon of Akkad coincided, at least in Eshnunna, with any sudden change in the composition of the population.

The continuity in the alignment of the houses is easily explained on

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practical grounds. For in building a house of mud brick in a country where the infrequent but very heavy winter rains turn the streets into rivers, it is advisable, where possible, to use the ruins of an older house as the foundation for a new structure; walls unprovided with such foundations are likely to be undermined by water running in the gutters or spouting down from the roofs. We often find in the plan of a house details which do not seem rational or in keeping with the prevalent conception of Babylonian house-planning, but which can be explained when we descend into the next stratum below. It then appears, more often than not, that these are due to the builder's sacrificing the shape and function of a new room to the convenience of using an earlier wall as a foundation. This applies to a house on Middle Road (the "arch house"; see pp. 10–15), as it existed late in early dynastic times (Stratum V). We have also the plans of houses which stood on this spot in early and late Akkadian times (Strata IV*b* and IV*a*) and in the succeeding period (Stratum III). Throughout this time, that is, over a period of more than two centuries, we find not only that the street front but also a number of walls inside the "arch house" were rebuilt with each renovation or reconstruction, so that parts of the house plan continue to be almost identical throughout this time.[2]

In our excavations we have to study very closely this process of rebuilding. Since the succession of dynasties did not bring destruction to Eshnunna, we find in our superimposed strata no clear-cut division extending all over the site. We have to deal with a continuously inhabited settlement where each house was periodically rebuilt according to the needs and means of its owner. To illustrate the complications in stratification which thus may arise, we have sought a parallel in the modern city of Erbil in the north of Iraq. This city stands on the ruins of the Assyrian town of Arbela, and the process of rebuilding goes on today as it did three thousand years ago. Figure 2 shows one of the narrow streets between the mud-brick houses, with a gutter running down the middle; the house at the right-hand side of the pic-

[2] It may be well to emphasize the fact that this continuity in the rebuilding of a house is essentially different from the continuity which consists in the use of an identical type of house through several centuries. The first is opportunistic; the second betrays the persistence of a cultural tradition.

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ture has fallen into ruin, while the next one is occupied. If the ruined site were to be bought today, it would be leveled only sufficiently to reach the top of the ancient walls, and the house constructed over the ruins would therefore have its floor level at least a meter above that of the adjoining house. This is exactly what we often find to be the case in our excavations. For instance, the unusually good state of preservation of a house of Stratum V (the "arch house"; see pp. 10–15) caused



FIG. 2.—A street in the modern town of Erbil

the rebuilding on this spot in Period IV*b* to take place at a level about a meter higher than that at which the contemporary houses to the north and east were founded. Consequently a retaining wall had to be built surrounding this high ground. It is clear that on this account our leveling instrument is of little use in determining the stratum to which a particular floor level belongs. It is from the individual history of each house, and sometimes of each wall, and the way in which houses and walls are connected with one another that we obtain the information needed for our relative chronology.

The complications caused by the gradual rebuilding of the settlements are in some places increased by the denudation of the mound,

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since along its flanks the earlier strata come to the surface. The fact that earlier walls are re-used in later times makes this circumstance a particularly dangerous source of confusion. Sometimes a natural depression in the side of the hill has formed a gulley for surface water, and the rains of many successive seasons have here cut deeply into the ruins beneath. Hence, for the sake of clarity and to counteract the results of damage to buildings caused in this sort of way, the plan we give (Fig. 1) is a composite one. The black walls belong to the second half of the Akkadian period (Stratum IV*a*); the walls shown in outline belong either to Stratum IV*b* or to Stratum V, which is pre-Sargonid. We know already that these early walls continue in such a manner underneath the walls of IV*a* that the plan of the early dynastic town (Stratum V) will not differ essentially from that shown here. But we have not yet been able to penetrate everywhere as far as Stratum V, and can therefore only show the whole area in a combined plan. This gives an idea of how the denudation of the mound has reduced the remains in Stratum IV*a;* it also shows the destructive action of a gulley which carried off rain water in a southwesterly direction and destroyed everything even to beneath Stratum V in H 19 and G 20. It follows that we shall get a more complete picture of the town as we descend to deeper strata. The town plan, such as it is (Fig. 1), suggests that the southwest-northeast communications were the most important. It may be that West Street, which seems to prolong South Road toward the northwest, continues and meets North Road, which curves southward. But this is uncertain; and the alleys, such as East Street and West Street, which run at right angles to the main roads, serve merely as approaches to houses not directly accessible from the latter. It seems, moreover, that these approaches are included in private estates; for, while the "roads" remain in use throughout, the "streets" are differently disposed in successive layers, old ones being built over and incorporated in a house when it is rebuilt, and new ones being opened up when need arises.

The closely knit character of the settlement is understandable enough in a country where open spaces mean biting winds and pools of water in winter, and glare and whirling dust in summer. The total absence of gardens, however, is striking. Perhaps their cultivation would have required more ample means than those available. For the

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inhabitants of our houses appear to have been middle-class people, traders and craftsmen.

Since the houses are all of one type, we may examine the house in J 19 on our plan, which serves as a good example. At the entrance from the street two communicating vestibules gave access on the right to a



FIG. 3.—Toilet in a private house of the Sargonid period

service court (6) with living-rooms for servants at its north end, and on the left to a central room (3). A square brick in the middle of the latter probably served as a base for a wooden column supporting the roofing beams. Beyond this to the northwest 14 is probably the reception room, as suggested by its general position and also by the doorsill of baked bricks with which it is furnished. As the door is not in the middle of the wall, we suppose it to be arranged on what Andrae has

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distinguished as the "northern" ground plan; the seat of the master of the house would then be placed against the southwest wall.

A step leads down from 3 into 21, which appears to be another central room; in fact, in Stratum IV*b* we find that 21 was the original central room of the house and that the rooms we have described so

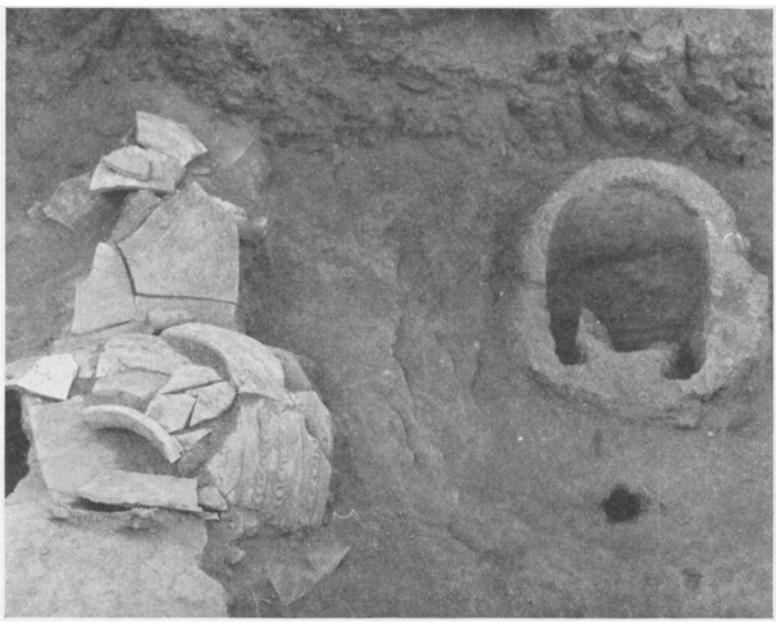


FIG. 4.—A smithy of the Sargonid period

far are extensions of the original house. These new rooms I should like to consider as the more public part of the house, where guests were received, while 21 and the surrounding rooms might be set apart for the use of the family. In 20 there are remains of bread ovens. These occur in the pre-Sargonid Stratum V also, but not in Stratum IV*b*, which is interposed between Stratum V and Stratum IV*a* which we are discussing. In the same way a dais such as we see in the southern corner of 21 is absent in Stratum IV*b*, but appears in exactly the same position in Stratum V. Since no direct tradition connects this pre-Sargonid with the later Sargonid building of IV*a*, this can only be explained as the result of conventional methods of architectural com-

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position which prevailed in Mesopotamia and Egypt.[3] For we find, when we examine other houses, that the plan of the house under discussion was in general use.

In a small house in H 18, entered from East Street, we find combined in one room (28) the functions of vestibule, service court, and

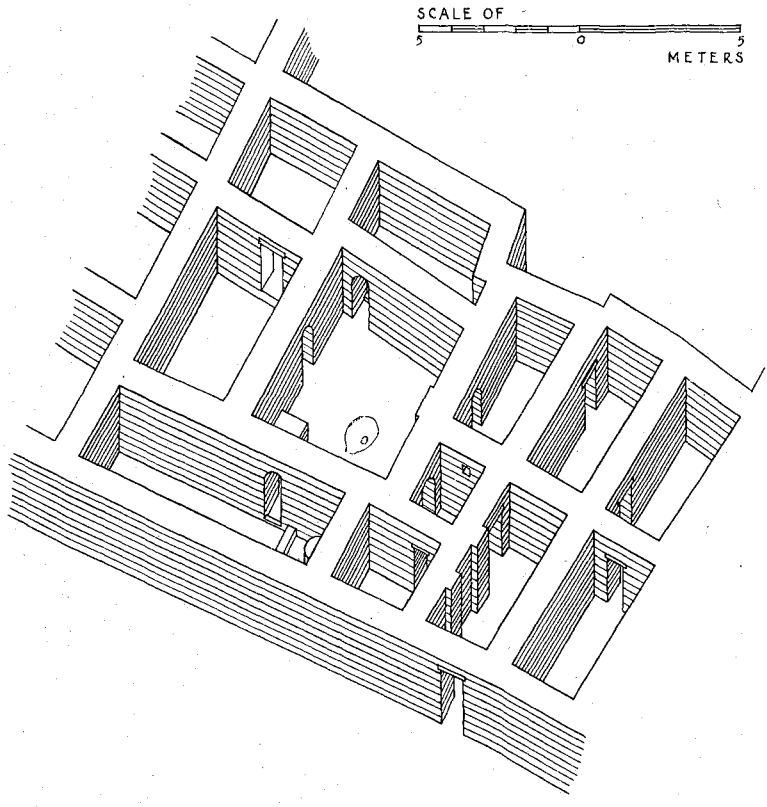


FIG. 5.—Projected plan of a house of the early dynastic period (the "arch house").

entrance hall. Room 23, which corresponds with the reception room of the other house (14 J 19), is accessible not directly from the central room (29) but only through a smaller room northeast of it. In this reception room (23) a brick structure against the southwest wall is possibly an altar. To the southeast other units seem to have been

[3] See Frankfort in *OLZ* XXXVI (1933) 354–57.

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added to this house, but the slope of the mound makes its connection with them obscure. This is the more regrettable as two interesting features are preserved here: in 7 J 18 a toilet with the seat covered

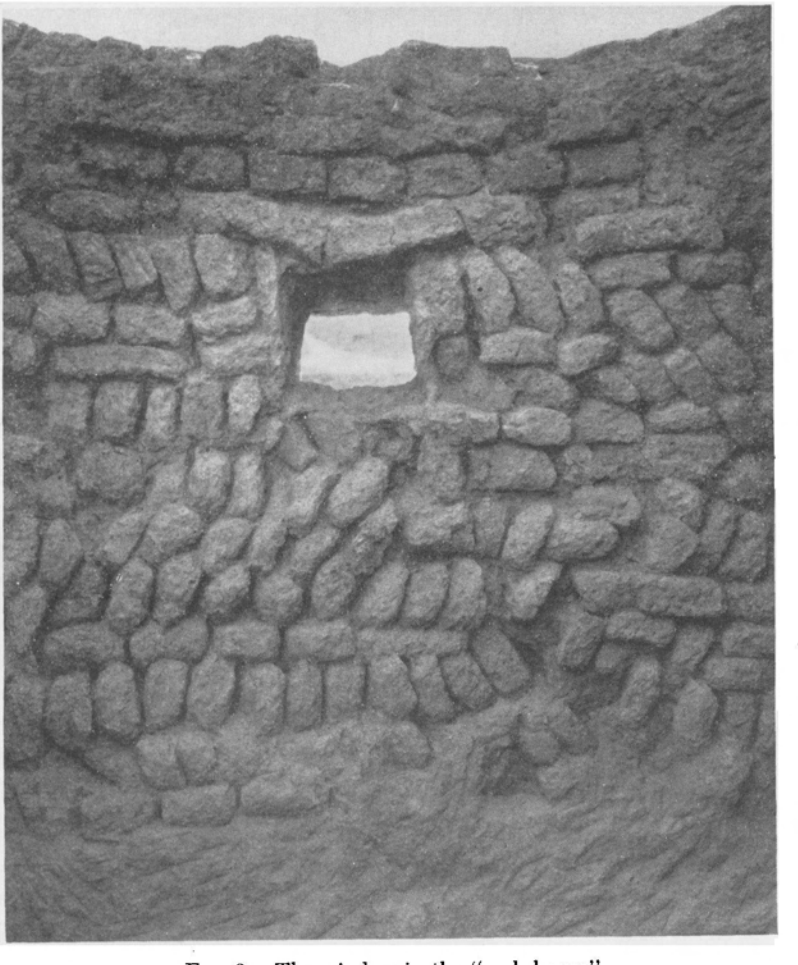


FIG. 6.—The window in the "arch house"

with bitumen (Fig. 3) and in 1 J 18 a forge (Fig. 4). Adjoining the latter were small troughs, inclosed by low mud ridges, along the southeast side of the room, perhaps for ores and fuel. The space occupied by the furnace was also walled in. In the floor, well outside the hearth,

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was made a duct into which a blowpipe could be inserted to introduce an air current into the center of the furnace.

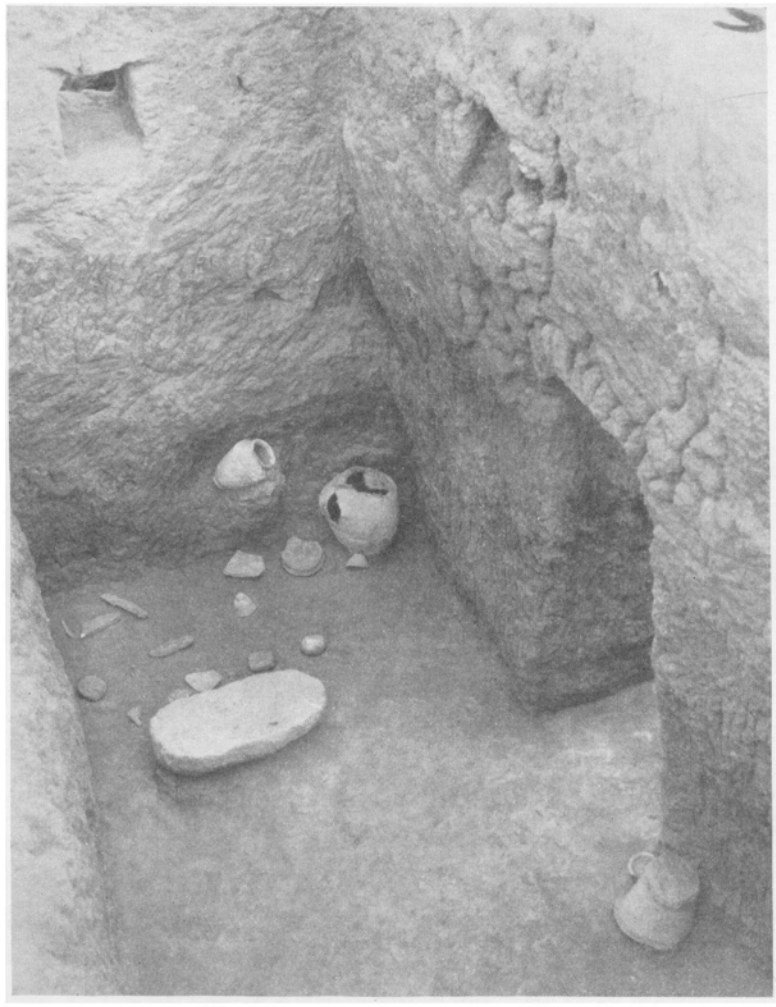


FIG. 7.—Food storeroom in the "arch house," as found

One might enumerate many additional variants of this same plan, but we shall here content ourselves with drawing attention to a structure in K 21 opening off South Road. Here the room into which

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one first enters was probably used as a shop. It is not only exceptionally large, but contains at its western end what looks like a divided counter where a variety of wares could be displayed, while the vendor could find room behind the counter to attend to his customers.

The house with the shop belongs to Stratum V, and in this same stratum we made an important architectural discovery beneath the

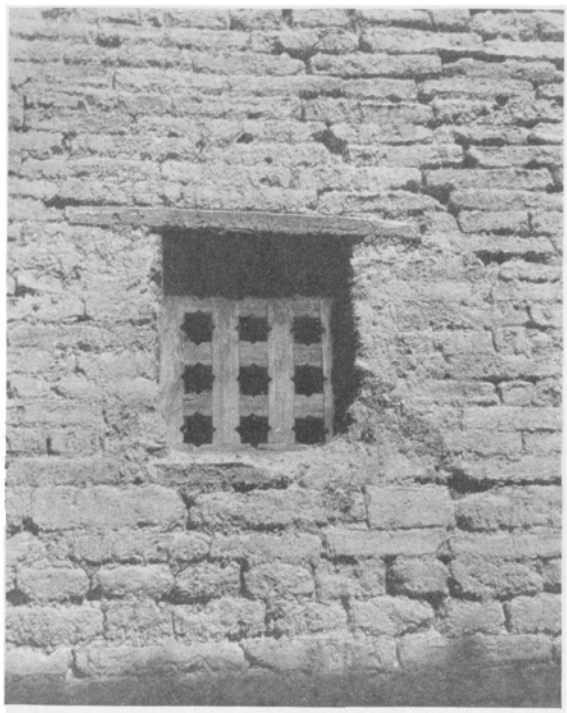


FIG. 8.—A window with wooden grille in a modern house in Erbil

house in J 19 which we have already discussed. A projected plan of the earlier version of the latter is shown in Figure 5. One enters from the street into a lobby opening on the left into a second small anteroom, in which stood an oven. From here a doorway gives access to the central room of the house. It may well be that the anteroom was open to the sky and that the apartments mentioned so far were shut off from the street by a mat or reed screen only, for the pivot stone for a wooden door was found between the anteroom and the central

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room. And, most unexpected of all, one wall of this anteroom has a window, the first in the history of Babylonian excavations to be found completely preserved (Fig. 6). It is very small, measuring about a foot square; but even so five stout sticks were necessary to form a lintel, and these still survive in the shape of a carbonized fibrous substance which clearly preserves the structure of wood. This small window gave

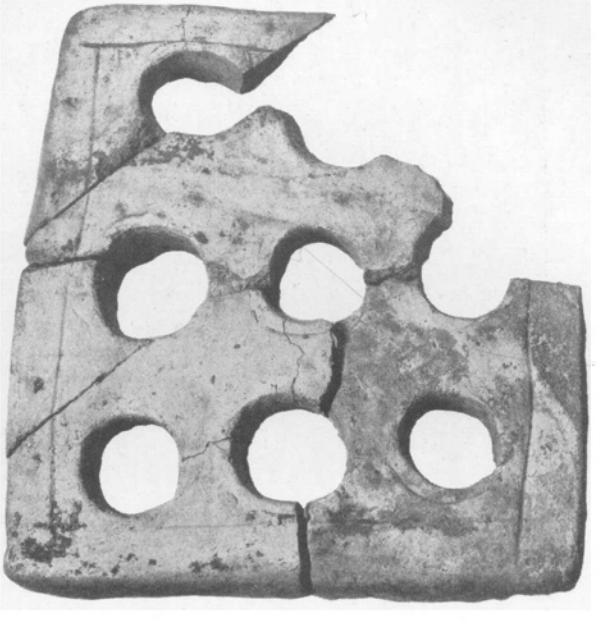


FIG. 9.—A terra cotta window grille of Sargonid date. Scale, 1:6

light to a food storeroom (Fig. 7), where various vessels, millstones, a quern, and whetstones were found lying precisely as they had been left in antiquity. Also perhaps it allowed the people in the house a glimpse of their visitors before they opened the front door. It seems likely that the window was closed by a wooden grille, such as is used nowadays in windows of the same size in Erbil (Fig. 8); elsewhere on the site we found terra cotta window grilles, but they seemed to fit a larger type of window (Fig. 9).

The central room itself contained a mud bench against the wall facing the entrance door (Fig. 10). In the center of the room is a hearth

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which still contained ashes and showed the hollows in which pots containing food were laid to keep warm among the cinders. Four arched doorways, three with their arches completely intact, lead from the central room to those adjoining it (Figs. 10–12); but it is curious to note that none of these doorways is more than five feet high (Fig. 11), so that one has to stoop to pass through them, as in modern Kurdish

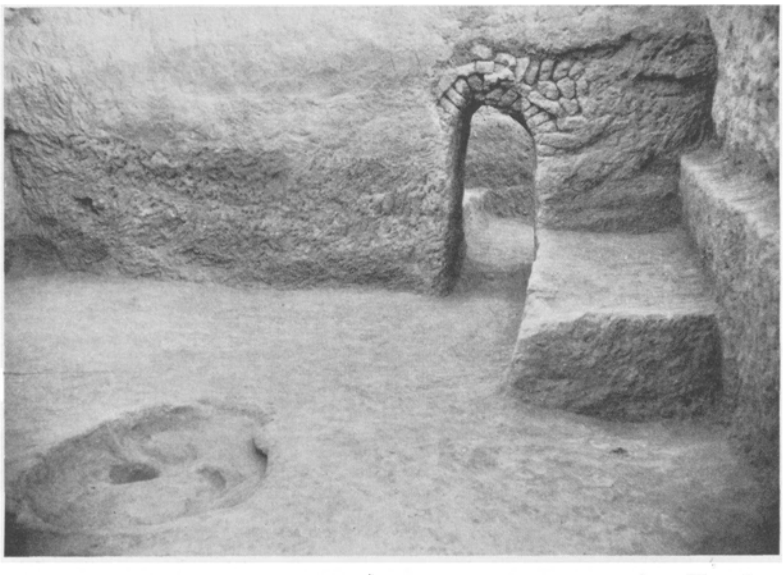


FIG. 10.—The central room in the "arch house," showing hearth and bench

towns. The arches themselves are of great interest; obviously they were built without the support of a wooden frame, being simply held up by an assistant while the mason put in the keystone. That the arch was used at all in this early period is new knowledge; its discovery was as unexpected as that of the window.

The door beside the bench communicates with a room in which are two bread ovens (Fig. 12), identical with those used nowadays, inclosed by a narrow wall about two feet high. This was evidently intended to protect the floor mats and other inflammable objects from the hot ashes, which, as one knows by modern analogy, are scooped out of the oven as soon as it is sufficiently hot, preparatory to baking the thin slabs of dough against its hot inner face.

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Altogether the knowledge which we obtained of the domestic architecture of the period is new and important. Private houses of the Sargonid and early dynastic periods have not been excavated before.[4] In this report we can do no more than mention a few details. We may

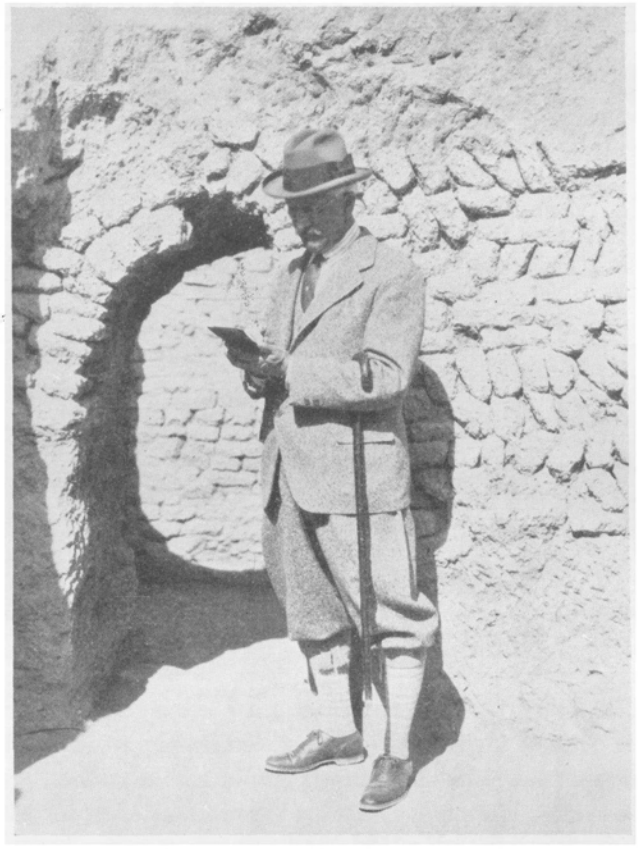


FIG. 11.—Dr. Breasted in front of the northern arched doorway in the central room of the "arch house."

conclude with the remark that we did not find evidence anywhere of the existence of an open court or of a second story. In one place Mr. Hill has tentatively restored a double wall as a staircase, but this is

[4] If the houses found by Banks at Bismayah are early, his method of publication was such that it greatly depreciates the value of his discoveries.

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frankly a hypothetical reconstruction. The open court which is the central feature of modern houses in Iraq, and which Mr. Woolley found at Ur in the Larsa stratum, is absent at Tell Asmar.

The only element of the house of which we know nothing is the roof. The disposition of the rooms suggests, however, that their roofs must have been at different levels, since none but clerestory lighting is possible for the inner chambers. Since we find that in modern towns

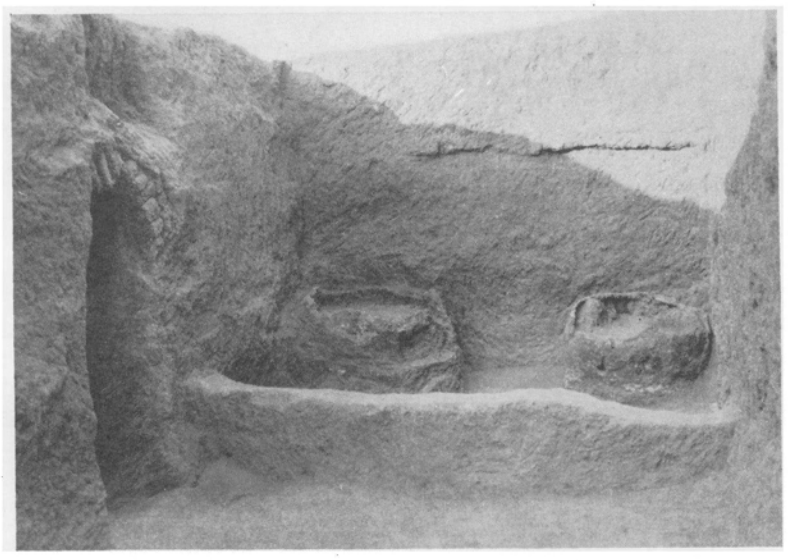


FIG. 12.—Bread ovens in the "arch house"

in this neighborhood, such as Mandali and Balad Ruz, the roofs are constructed with a slight pitch, and since the infrequent yet violent downpours in the winter can do much damage unless the water can easily find its way to the ground, Mr. Hill in his restoration in Figure 13 has suggested roofs of this type. In his restoration the viewpoint is northeast of and above the town; the street on the left of the picture is therefore Middle Road, and that on the right is North Road. The rows of houses in the background and at the right-hand top corner are fictitious; for the rest, the plan of Figure 1 was used as a basis. The court (with two figures in it) bordering on Middle Road (toward the left of the picture) is the service court (6 J 19) which we mentioned

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above. The clerestory lighting of the central room (3 J 19) of the house to which it belonged is very plain.

Of the objects found in the houses little is said here. Those which have a religious significance are discussed in chapter iv, since their

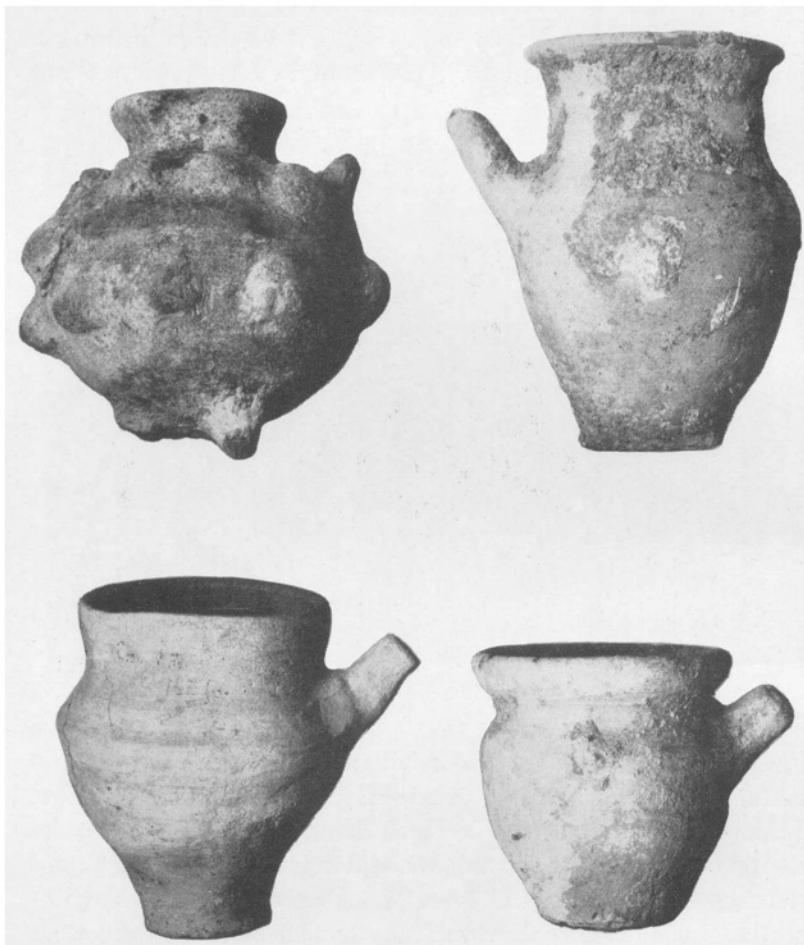


FIG. 14.—Early dynastic pottery. Scale, 2:5

combined testimony is of considerable importance. Such are some of the cylinder seals, of which we found again a numerous and instructive selection, and an alabaster group of a snake-god with his worshipers

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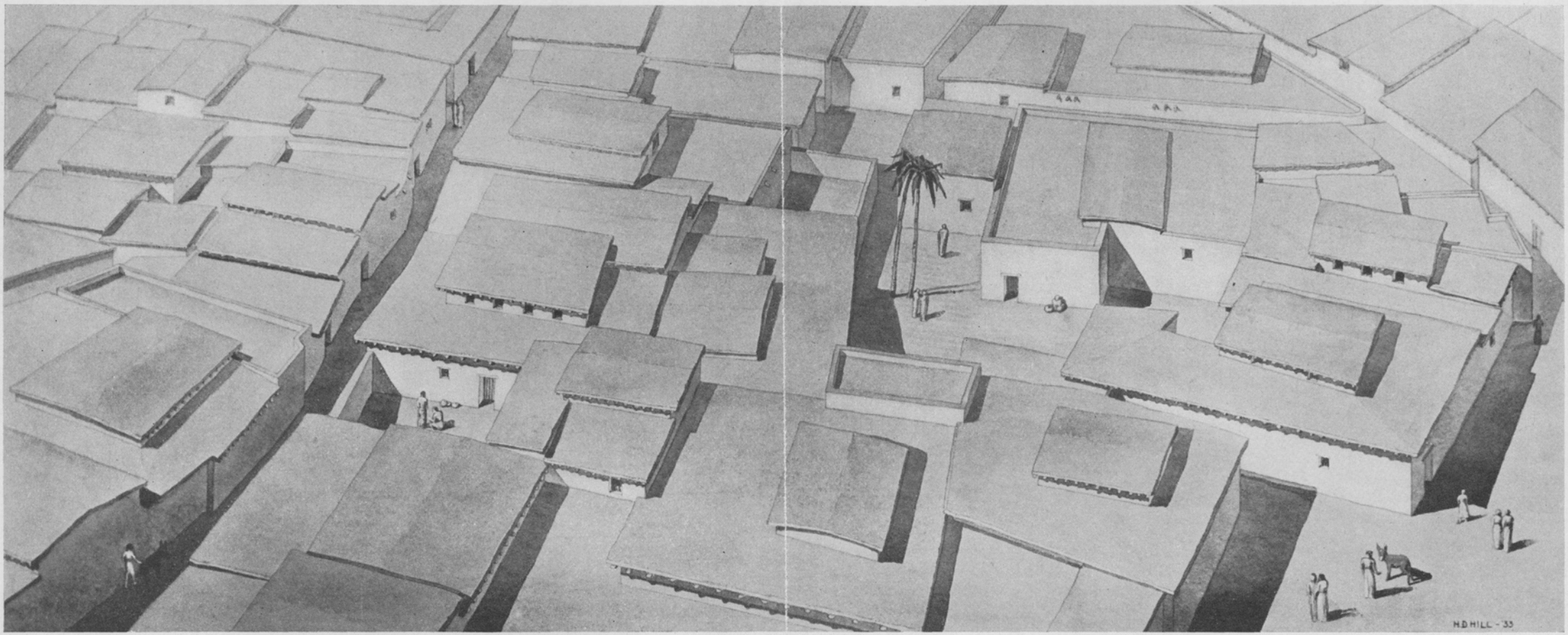


FIG. 13.—Restoration of Eshnunna in Sargonid times, by Harold D. Hill

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(see Figs. 44–45). It should be mentioned, however, that this last-named piece of sculpture was found in Stratum III (3d Ur dynasty or Gutium) in a room which may have been a private chapel; for a large vessel found near it, of a type common in the Sargonid stratum (cf.



FIG. 15.—Sargonid pottery. Scale, 1:5

Fig. 15), resembling a soup-tureen but with a circular spout, had had a snake in clay applied to its shoulder, so that the vessel was evidently dedicated to the ritual of the snake-god. Figures 14 and 15 show various types of vessels which are characteristic of the early dynastic and Sargonid periods respectively. The "pilgrim bottles" of Figure 15 are curious; the modern term "hip flask" is certainly more appropriate, for they

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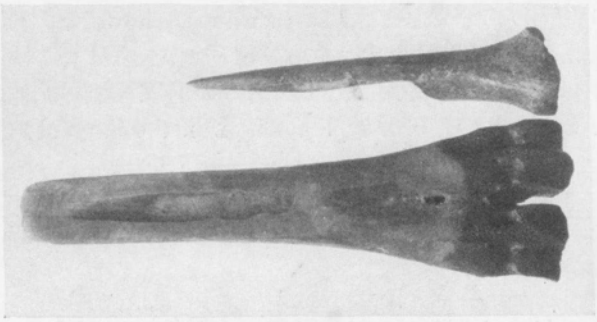


FIG. 16.—Bone spoon and one-pronged fork. Scale, 1:3

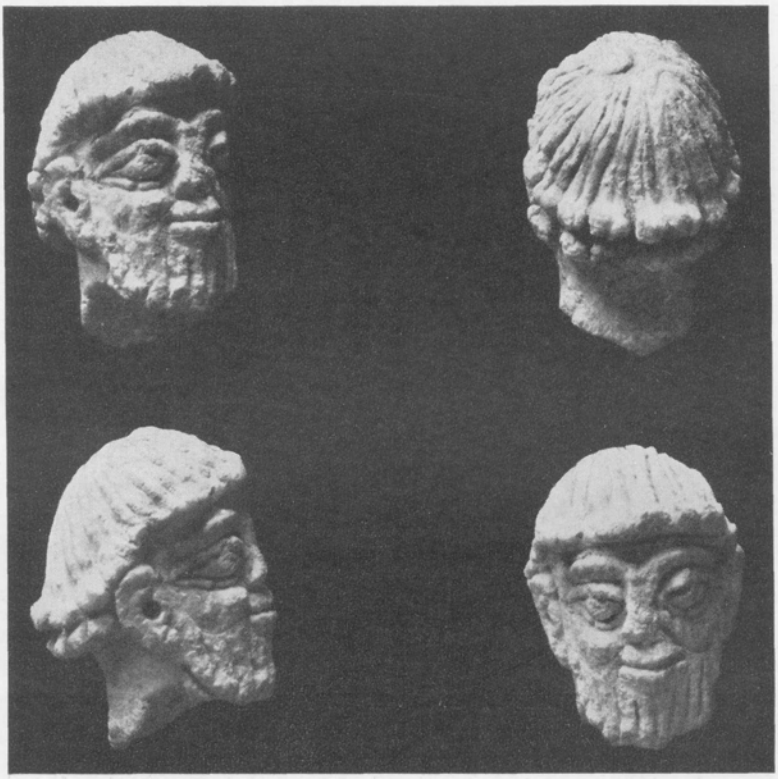


FIG. 17.—Alabaster head of an Akkadian. Actual size

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are flat on one side and convex on the other and were doubtless worn at the belt when townsfolk went to work in their fields, as these were probably not always in reach of a canal. Bone objects such as those depicted in Figure 16 must also have been of common household use, for they were found in great numbers. It seems to me that these were spoons and single-pronged forks, and that the meat would first have been cut up with a knife of the type which until now has been called a "dagger," but which may well have served a more domestic purpose.

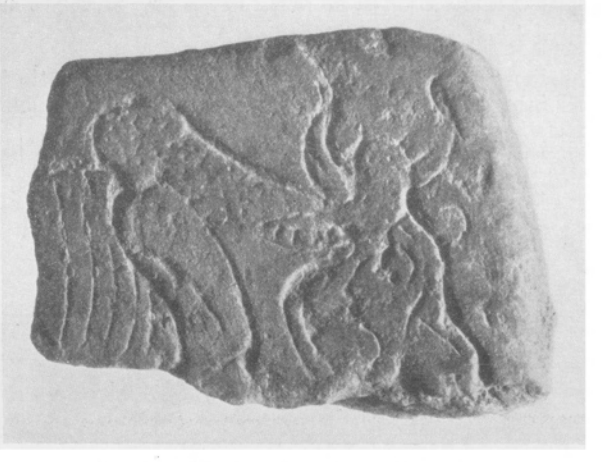


FIG. 18.—Sketch of a zebu. Actual size

This seems the more likely since we found similar knives (Fig. 32; cf. Fig. 56) hidden near the temple among the vessels of a service for a ritual meal.

Two single objects deserve special mention. The first is the alabaster head shown in Figure 17. Its characterization is unmistakable; even if it had not been found in a Sargonid layer, we should recognize this portrait of a Bedawi of the desert with his short curly beard and big cruel mouth. As it is, it gives us the first portrait of one of Sargon's subjects—the first well testified rendering in the round, in fact, of an Akkadian type. Until now we have had only the relief portraits on stelae of some of the Sargonid rulers to show what their physical type was like. In accordance with immemorial custom in Mesopotamia the

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upper lip is shaved, and the hair, combed outward from the crown of the head, falls in two rows of short curls round the neck.

A second object found among the houses is a fragment of a clay tablet (Fig. 18), a "page from the sketchbook" of an artist of old, on which he had drawn the head and shoulders of a zebu. The animal faces to the right; the tablet is broken off below his muzzle, the fracture passing across the ribs. This is the only new evidence of intercourse with India which we found during the past season. Etched carnelian beads and some pots with barbotine decoration like those from Mohenjo Daro—though different in shape—merely confirm what we had learned last year on the subject.[5]

[5] For a full discussion of the problem see the author's article in the forthcoming 1933 volume of the *Annual Bibliography of Indian Archaeology*, published by the Kern Institute of Leyden.

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II

TELL ASMAR: THE AKKADIAN PALACE

For a considerable portion of its length North Road widens into a public square, and to the north of this square we had in 1931/32 come upon the remains of buildings of a character entirely different from that of the private houses (Fig. 19). While Dr. Jacobsen was excavating the latter, therefore, Mr. Lloyd began further investigations of the former. We described in our previous report how, at the crowns of two mounds in this section, isolated houses constituted the only remains attributable to the Larsa period and how a paved room in one of these houses contained burned bricks inscribed with the name of Shulgi.[1] These were evidently in secondary use, because among buildings directly beneath were also found tablets dating from the 38th year of that ruler. These latter remains belong therefore to the 3d dynasty of Ur.

Beneath them in turn we observed a phenomenon the full significance of which did not become clear until some time later. This consisted of a layer of rubbish about a meter thick which seemed to occur everywhere beneath the 3d dynasty of Ur stratum and to separate these higher remains from those of the buildings shown in Figure 20. Among a great quantity of ashes and broken pottery this rubbish layer contained cylinder seals and other objects belonging to the Akkadian period. The obvious inference is that some of the Akkadian buildings had been deserted and had stood in a ruinous state for a rather long period before they were rebuilt and again inhabited during the 3d dynasty of Ur. This presents a definite contrast to the case of the private houses, which, as we have proved (p. 4), were continuously inhabited all through this intermediate period. We were therefore driven to the conclusion that the large building in Figure 20 was of a public nature, in which case its desertion and ruin can be ascribed to the period of anarchy after the wild Gutium mountaineers from the east had overthrown the last king of the dynasty of Akkad. It will be remembered that tablets dated to the reign of this last king, Shudurul, were found among the private houses;[2] and we may thus suppose that

[1] See *OIC* No. 16, pp. 53–57. [2] See *OIC* No. 16, p. 39.

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FIG. 19.—General view from north, showing Akkadian palace in foreground, private houses in left background, and water tower of the expedition house in right background behind the hill.

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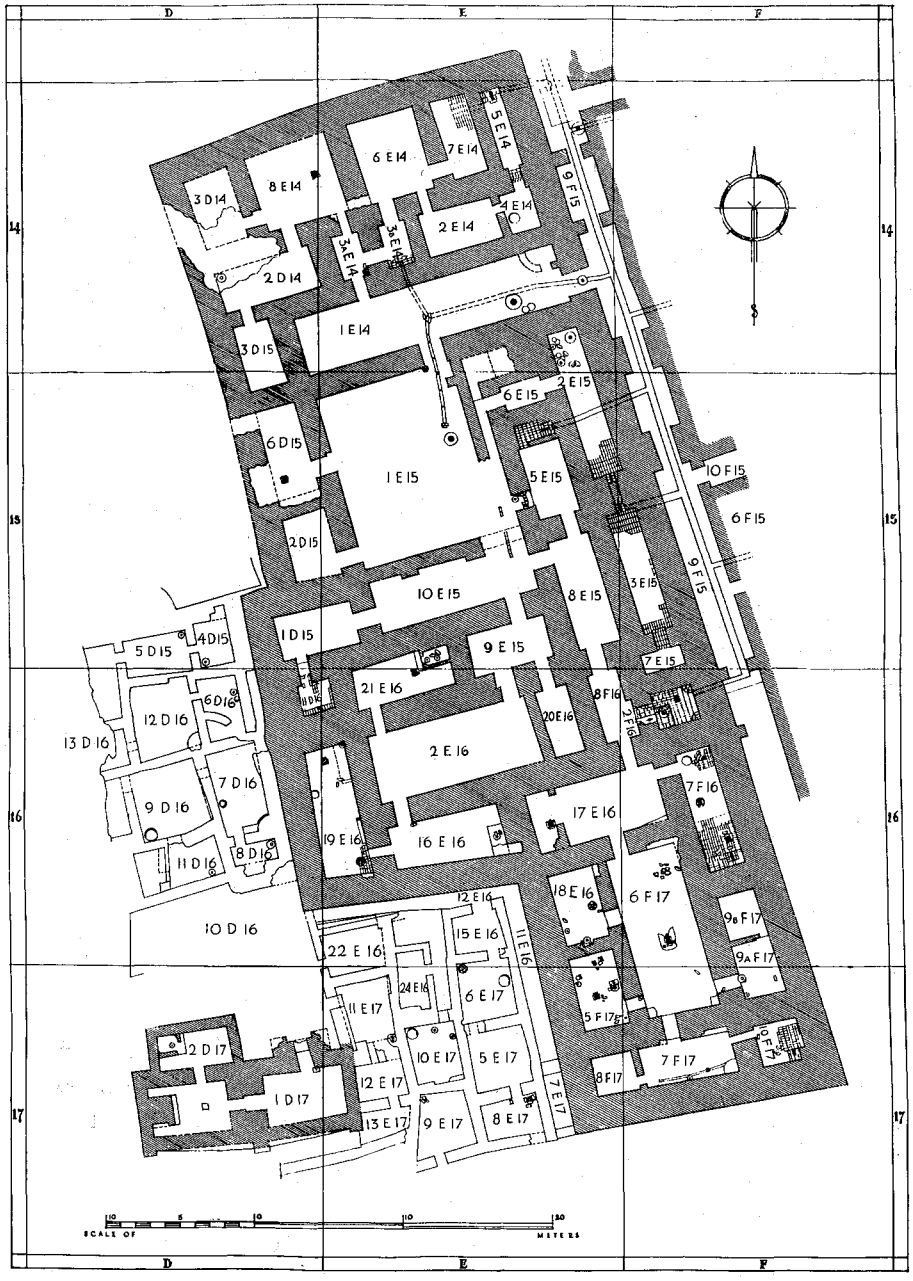


FIG. 20.—Plan of the Akkadian palace and temple at Tell Asmar. Scale, 1:500

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the populace continued to live in Eshnunna although the palace of its local ruler was deserted.

The foregoing consideration, combined with the large scale upon which this building is conceived, goes far to justify the designation "palace" for it.[3] The palace seems to be part of a larger complex. The

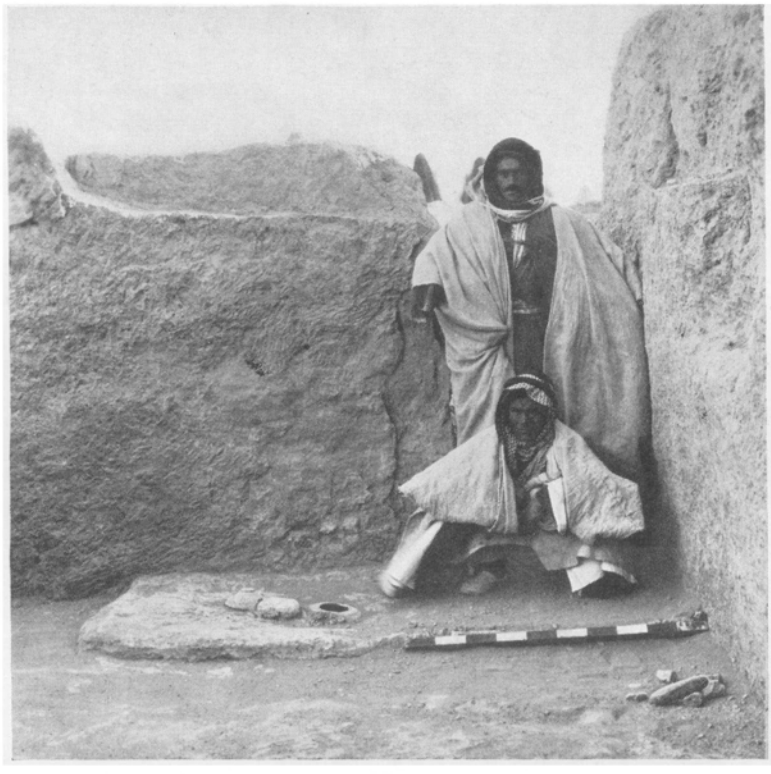


FIG. 21.—Living-room with dais in the Akkadian palace

narrow passage or street which runs along its eastern wall through F 14–15 and E 14 is flanked by another building, of which we have as yet traced only the one wall which shows in Figure 20. But it will be

[3] It should be noted that the walls which are left in outline in Fig. 20 belong to the same period as the palace; but the outhouses which they comprise seem to be insignificant in function. They are left unshaded so that the two more important buildings, namely the palace and a small temple discussed in chap. iii, may stand out more clearly.

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seen that the buttresses projecting from it correspond to those of the palace wall opposite it. Each pair of these may have either formed the jambs for a gateway or supported an arch if the passage was covered. In any case it is in this not very imposing alleyway that the only entrance to our palace occurs.

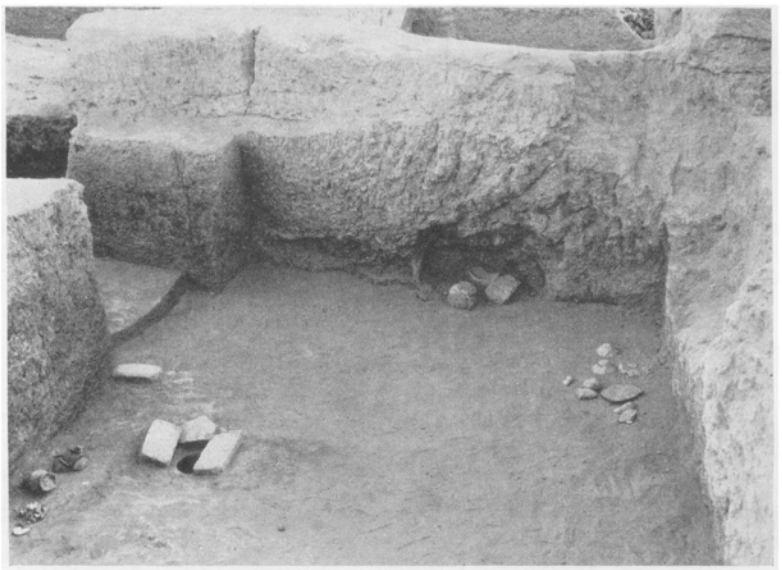


FIG. 22.—Room 18 E 16 in the Akkadian palace, looking south

This entrance leads into a long open court, 1 E 14. To the north of this we find a self-contained unit or wing which we may consider to have been the private quarters of the ruler. The entrance hall (3A E 14) of this wing gives access on the one hand to four rooms for attendants, in the northwest corner, and on the other hand to an anteroom (3B E 14) the drained pavement of which suggests that here ablutions were performed before one entered into the presence of the prince.[4] Of the remaining rooms in the ruler's quarters 5 E 14 is a toilet, and another pavement suggests that 7 E 14 was a bathroom; 2 E 14 would then be the prince's bedroom. Returning to the entrance court, 1 E 14, and continuing southward, we enter a second court,

[4] See *OIC* No. 16, p. 17.

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1 E 15, which is proved to have been open to the sky by both its dimensions and the presence in it of a drain for rain water. A door socket indicates that it could be closed against 1 E 14.

If we disregard the two rooms on the west of 1 E 15, 2 and 6 D 15, which may be either reception rooms or guardrooms, we can distinguish two parts of the palace to which this court gives access: the central or living part and the south wing, which we believe to have been the harem. A wadi made by rain water running down the side of the mound cut across the building in a northeasterly direction, partially destroying the walls of several rooms which are fairly easy to restore. But it also obliterated most of the south wall of 1 E 15, making the entrance from it to the southern part of the building a matter of conjecture. Through a series of rooms—10 E 15, 9 E 15, and 2 E 16—one reached the living-room, 16 E 16, clearly characterized as such by a dais in the southeast corner (Fig. 21); a jar built into the dais no doubt drained water used for washing the hands before meals. An oven in 21 E 16 shows where these were prepared.

The south wing is reached through the passage formed by rooms 8 E 15 and 8 F 16. Room 17 E 16 then serves as an entrance hall to the central room, 6 F 17, from which the other rooms open. The inaccessibility of this quarter as well as the character of the objects found here suggested to us that it might have been a harem. In most rooms there are signs of domestic activities: handmills, hearths,[5] pots, and pans (Fig. 22). We like to think of the two-room suite 9A and 9B F 17 as a woman's private apartment, with bedroom and sitting-room. Here we found beads, some rouge, and quantities of black kohl for the eyes, both cosmetics being stored in mussel shells. There were also an ivory comb and the raw material for what seems to have been the Akkadian equivalent of Victorian beadwork and embroidery—sheets of bitumen and shaped pieces of mother-of-pearl with which to inlay them—with some fragments of the finished work, perhaps intended for the lid of an ointment jar.

There now remain the rooms to the northeast of court 1 E 15 to explain. Unfortunately here also the denudation of the mound interfered with the plan. There is no doubt, however, that north of 6 E 15

[5] Hearths are formed by three baked bricks, set on edge, which obviously supported branches or scrub.

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we have a solid mass of brickwork such as can be explained only by assuming that stairs led up to the roof at this point and probably returned in a second flight suspended over the small vestibule 6 E 15. The curious wall between the court and 5 and 6 E 15, which was partly broken away by the wadi, may have served to screen the inhabitants of the south wing, when they went to the roof by means of these stairs, from the view of visitors in court 1 E 15.



FIG. 23.—A toilet in the Akkadian palace, with bricks of an earlier Akkadian structure showing on the right.

A striking feature of the palace is its elaborate arrangement for sanitation. We uncovered no less than six toilets and five ablution places or bathrooms. The toilets are of the western type, with high seat (Fig. 23), not of the oriental kind, which is level with the floor. They were built of baked bricks and were connected with drains (e.g., Fig. 24) which all discharged into a main sewer—a colossal structure one meter high and 50 meters long, vaulted over with baked bricks, which ran alongside the outer wall of the palace underneath the pavement of the passageway to the east (Fig. 25). The bathrooms also

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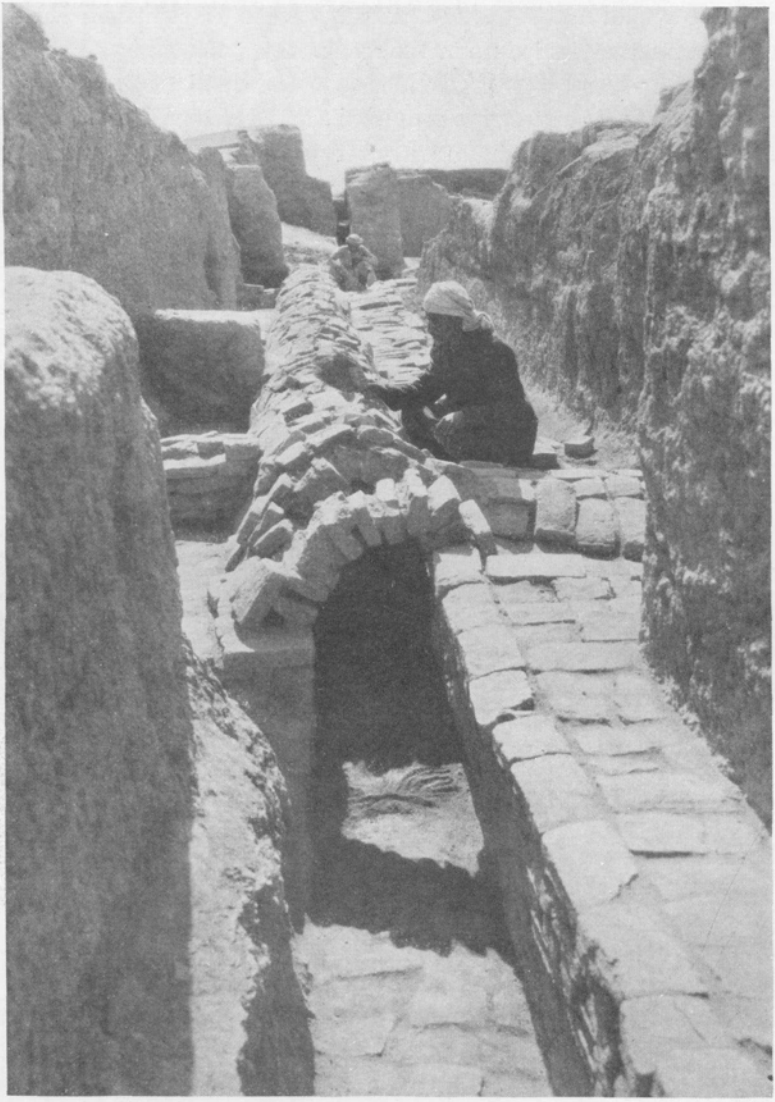


FIG. 24.—Palace toilet drain from 3 E 15 joining main sewer. The vaulting of the sewer had collapsed from this point onward, but that of the drain joining it can be seen on the right in front of the workman.

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FIG. 25.—General view of main sewer of the palace, looking southeast

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FIG. 26.—Upper end of palace sewer, with drain from a bathroom entering from left.

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drained into this sewer. In each toilet was found a large water vessel, generally built into the pavement, sometimes with a pottery dipper still inside it. Although the main sewer was big enough to permit a boy to go through it for the purpose of cleaning, it sloped sharply down to the north so as to allow the sewage to be washed down. At the northern edge of F 16 it reached its highest point (Fig. 26). The two toilets and the bathroom of the south wing could therefore not be



FIG. 27.—Ritual pot in the shape of a bird. Scale, 3:4

connected with the system and were accordingly furnished with cesspools of their own.

There is something incongruous about most of the rooms in which the toilets were placed. It would seem that only 10 F 17 was planned expressly for this purpose. It is possible that the actual seat was placed in a niche and that the brickwork on its western side had collapsed. The narrow doorway should be noted. The toilet screened off in room 5 E 15 also is rationally arranged; and the size of room 7 F 16 is not excessive, as it is a toilet and bathroom combined. I cannot, however, explain the size and shape of such rooms as 5 E 14, 2 E 15,

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and 3 E 15, which seem far in excess of what is needed. This may, however, be due to the influence of an earlier plan, for it is certain that the existence of earlier walls on the site has had its effect on the shape at least of our palace. The curious angle of the outer wall between



FIG. 28.—Silver and lapis lazuli of jewelry hoard from the Akkadian palace, as found. Scale, 4:5.

16 E 16 and 18 E 16, for instance, is explained by the fact that here it follows the outer wall of an earlier building.

The south wing of our palace is an innovation, as are court 1 E 15 and all the rooms to the north and west of it. The remainder of our palace stands on an L-shaped plano-convex brick structure which may have been originally either a modest palace itself or merely the house of a very rich man. It was surrounded by small private houses.

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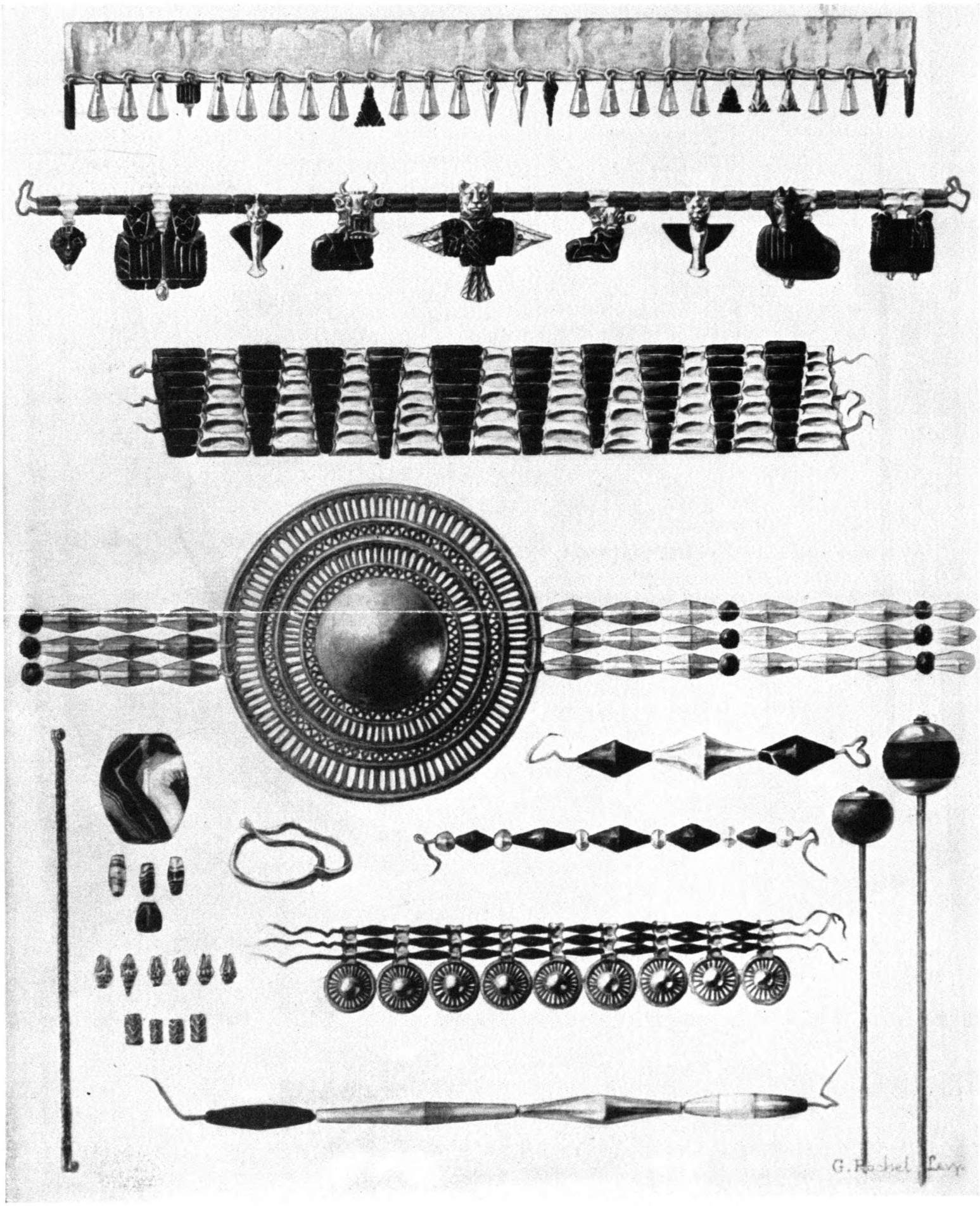


FIG. 29.—Jewelry hoard from the Akkadian palace, as restored by Miss G. Rachel Levy

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Beneath one of these, in D 15, we found a relic which belongs probably to a yet earlier period—a bird-shaped libation vessel (Fig. 27) of a type known in predynastic Egypt as well as in Syria and in Susa. Ours, however, has an opening in the breast, showing that it was used

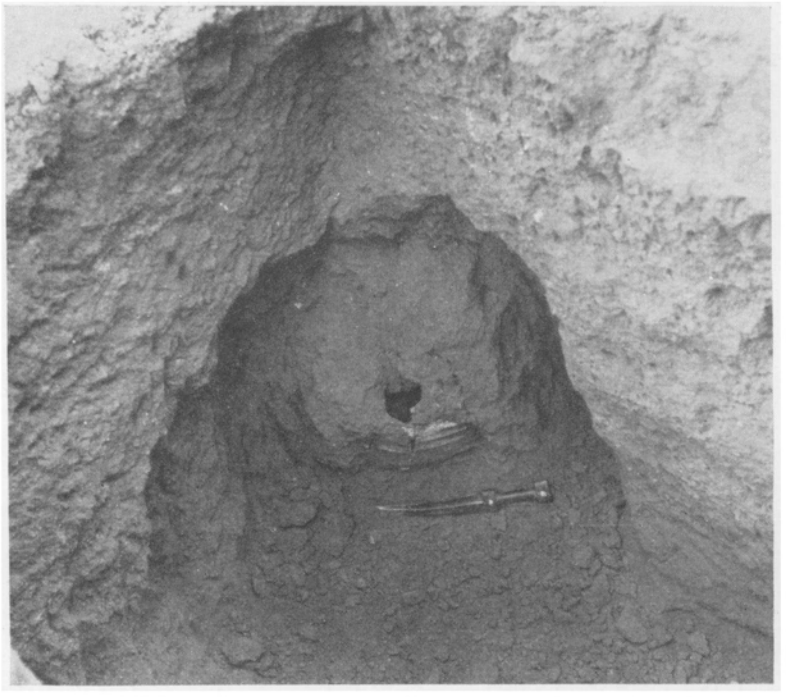


FIG. 30.—Hoard of copper objects in jar, at moment of discovery

in ritual, a feature which distinguishes it from the vases found in the countries just mentioned and connects it with the Hittite animal-shaped vases and rhytons and the rhytons of the Aegean region, which are of later date.

Here we are touching on problems of chronology which require further elucidation. Moreover, the buildings found at the depth at which this vase appeared are not discussed in this report. In tracing them, however, we made two discoveries which must be mentioned. Beneath the floor of the reception room (16 E 16) of the Akkadian palace, which we demolished in tracing the earlier building beneath, we found

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a hoard of jewelry hidden (Figs. 28–29). It contained a large disk (about 11 cm. in diameter) of silver filigree, numerous carnelian, lapis lazuli, and onyx beads, a set of smaller silver disks used as



FIG. 31.—Hoard of copper objects after removal of front of jar

spacers, and also some fine animal-shaped pendants with lapis lazuli bodies and silver heads. A tiny carnelian ring-bead threaded upon the silver wire which fastened each head to its body showed the maker's subtle sense for color effect. Three of the pendants represent a lion-headed eagle, the mythical bird Imgi. Now it is extremely interesting to note that this jewelry was found in a building dated by other evi-

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dence to Akkadian times; and yet it shows clear survivals of pre-Akkadian forms found at Ur and in the contemporary cemetery at Kish.

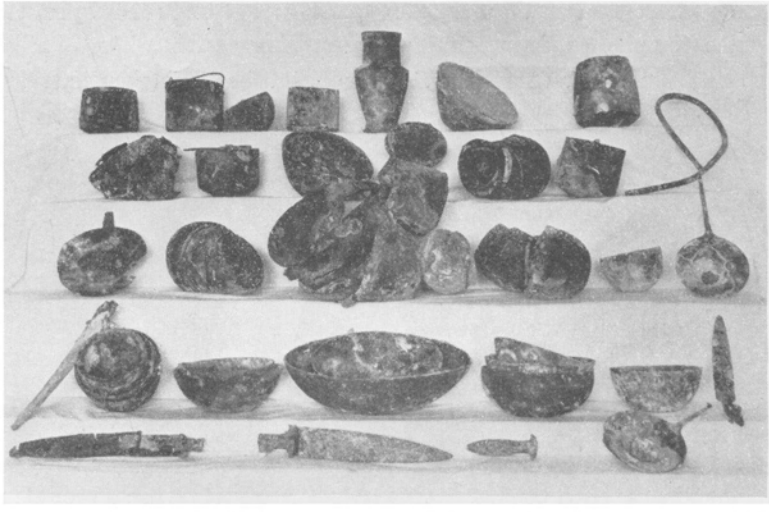


FIG. 32.—Hoard of copper objects after being released from jar. Scale, about 1:15.



FIG. 33.—Drawing of Sargonid seal impression As. 32–1200, showing a donkey and a lion each drinking through a tube. Actual size.

We discovered a second hoard, containing many replicas of objects found at Ur, hidden in the plano-convex building underneath room 19 E 16. It was found by one of our pickmen, who, while tracing a mud-brick wall, was faced with a small hole bounded by the yellow

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edges of freshly broken pottery, whereupon he realized that he had driven his pick through the side of a large jar (Fig. 30). On examination this jar proved to have been built into the wall of the room and plastered over and to be brimful of copper objects (Figs. 31–32). The jar contained no less than sixty copper bowls of various shapes, two bottles, four lamps, four "strainers," four daggers with hilts of silver foil, and, finally, a rare object—a copper tube 28 inches long and

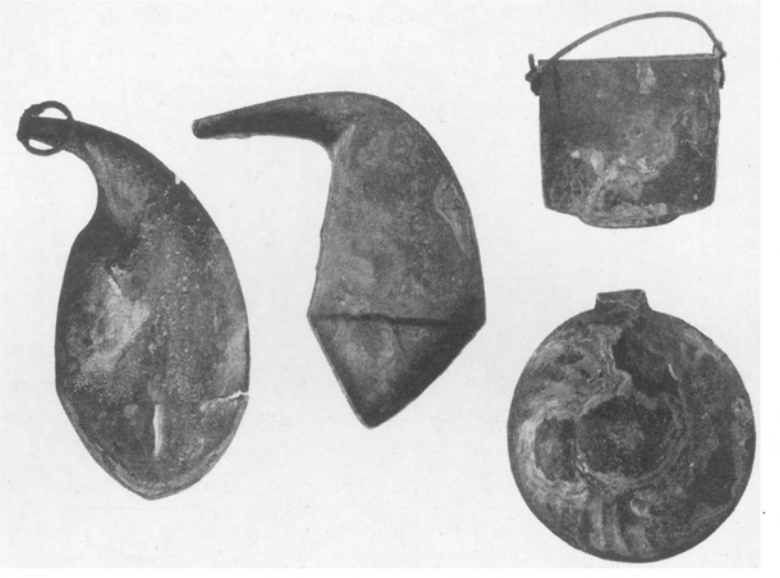


FIG. 34.—Two lamps, a bucket, and a fluted bowl from the copper hoard. Scale, 1:4.

½ inch in diameter, with perforations at one end—a drinking-tube such as the Sumerians used for drinking some unclarified liquid which we believe on Phrygian analogies to have been beer. A scene representing two people sitting on low stools on either side of a large jar from which they suck liquid through such tubes is often depicted on Sumerian cylinder seals from Ur and other sites. One unique seal impression (Fig. 33) shows a donkey and a lion each in that attitude. In contrast to the well known satirical papyri and ostraka from Egypt, such scenes seem to reflect in Sumer a very early stage of religious beliefs. Our seal impression belongs to Stratum IV*a* of the private houses, that is, to the time of the dynasty of Akkad. The well known harp from Ur, which shows among its decorations animals performing human actions,

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belongs to the early dynastic period. On the other hand a relief plaque from Tell Halaf shows a survival of such a scene in the middle of the 2d millennium B.C.[6] Thus our seal impression is the first link in the chain connecting these two periods.

Let us now return to some of the articles in our copper hoard (Figs. 34–35). Many of the vases and the lamps made in the shape of shells are identical with those found in the so-called "royal tombs" at

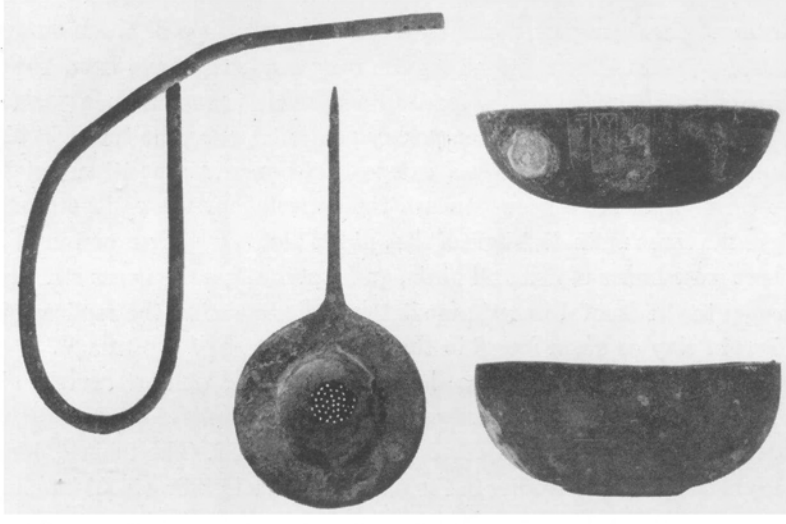


FIG. 35.—Drinking-tube with perforated end, strainer, and inscribed bowls from the copper hoard. Scale, 1:4.

Ur. There they were considered to be part of the normal furnishings of the royal palace. At Eshnunna we know that this was not the case; for two of the bowls are inscribed in archaic linear characters, and the inscription indicates that the vessels were dedicated to the "house of Abu," the lord of vegetation. It is very likely, then, that this hoard represents a complete service for a banquet of ritual significance held in the temple on an occasion to which we shall refer presently. The fact that it was found intact is no doubt due to its having been removed from the temple to which it belonged. Perhaps it was stolen, or perhaps merely hidden away upon the approach of a hostile army (the Akkadians?). The temple of Abu for which the service was originally intended is the small sanctuary which we uncovered in D 17.

[6] The date of the Tell Halaf sculptures has now been settled by Götze, *Zeitschrift für Assyriologie* XLI (1933) 251 ff.

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III

TELL ASMAR: THE TEMPLE OF ABU

The unraveling of the D 17 temple plan was a complicated undertaking, for the remains of its latest rebuilding appeared almost on the surface. This was partly due to the downward slope of the mound; but also we imagine that the temple may originally have been built upon a small artificial hill, for its floor level is more than a meter higher than that of the contemporary palace. Among the traces of its later Akkadian rebuilding was a deposit of bones in a position which we consider to have been beneath the pedestal for the god's statue. Here the three main divisions of the animal kingdom were represented. There were bones of fish and birds, and a pair of gazelle horns still attached to the frontal bone immediately called to mind the replicas of horns in clay so often found in the private houses of Stratum V.

The ruins of an early Akkadian rebuilding were well preserved and are shown in Figure 20; the early dynastic temple, built of plano-convex bricks, appears in the projected plan of Figure 36. The main difference between these two lies in the division of the building in Akkadian times into cella and antecella, whereas previously it had consisted of but one long cella into which the main entrance gave direct access. Otherwise all the main features are the same. The entrance doorway is set between two towers (Fig. 37). The god's statue stood on a high pedestal, with steps in front, which is built into a niche (see front. and Figs. 36 and 38). It is most remarkable that this arrangement differs from that of the southern Babylonian temples, where the cult statue stood on the main axis of the temple and, when the doors were open, was visible from the outside through all the intervening rooms and courtyards. This was the case, for instance, in the state temple of Gimilsin at Eshnunna, which presents a good example of the "southern" type of plan.[1]

The contrast between this latter type and the "northern" type, of which the temple of Abu is a new example, was first pointed out by

[1] *OIC* No. 16, front. and Fig. 3.

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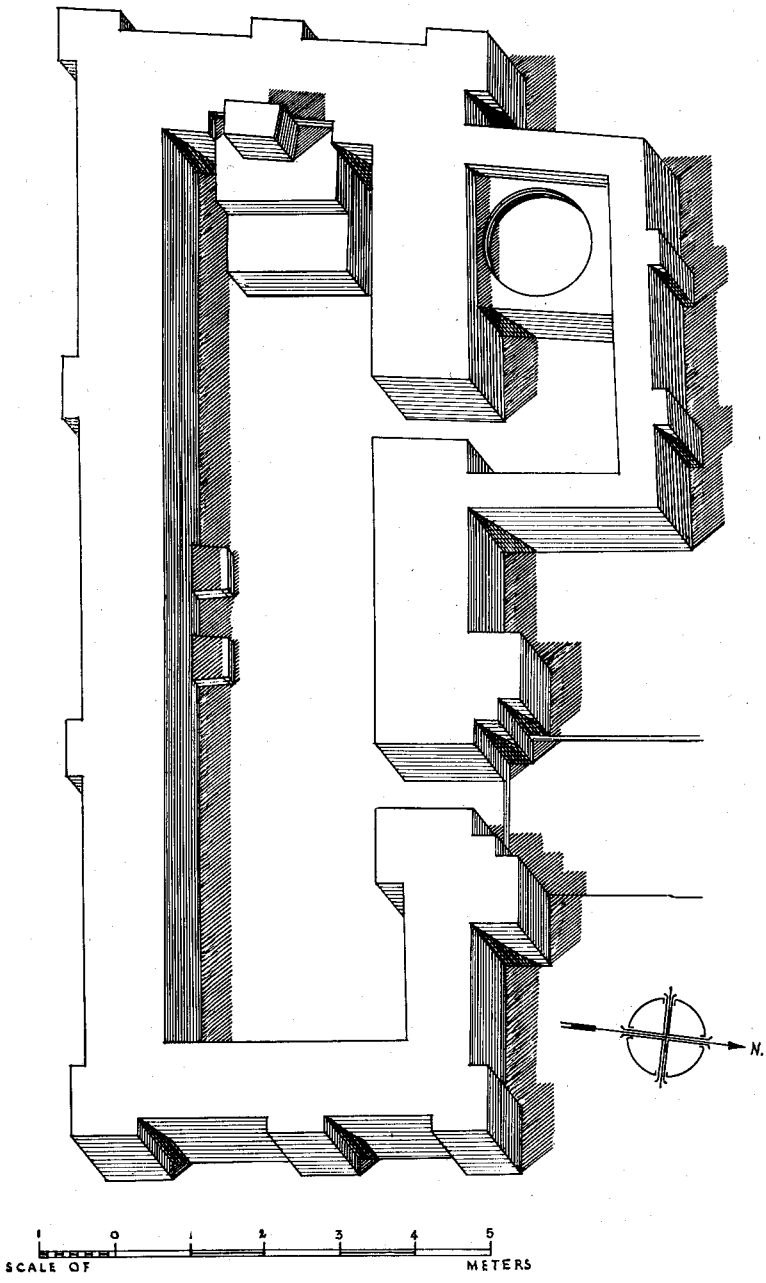


FIG. 36.—Projected plan of the temple of Abu at Eshnunna in early dynastic times.

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Andrae.[2] The earliest example of this "northern" type, with the entrance on the cross axis, was the archaic Ishtar temple at Assur, a building with which our new temple is contemporaneous. We have, in earlier reports, repeatedly drawn attention to the fact that the region east of the Tigris, of which the country Eshnunna formed a part, shows many traces of being as closely related with the culture of

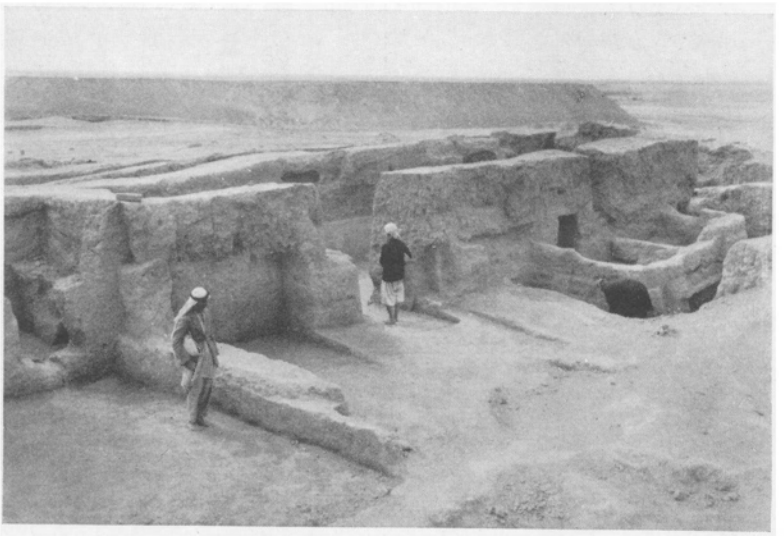


FIG. 37.—The temple of Abu, seen from north. The farther man is entering the doorway between the two recessed towers; the room containing a bread oven is on the right.

the mountaineers of Elam and the Zagros ranges as with that of Mesopotamia proper. Assur and the northern districts in general were subject to this same influence, and the plan of our newly discovered temple is a fresh link in the chain of evidence which proves this view to be correct.

A few details require further attention. On the surface of the lowest step leading up to the cult statue a large stone, shaped like a stela tapering toward the top, was let in (see Fig. 38)—perhaps to provide an even surface upon which vessels and other offerings might rest.

[2] *Das Gotteshaus und die Urformen des Bauens im alten Orient* (Berlin, 1930) pp. 1–30.

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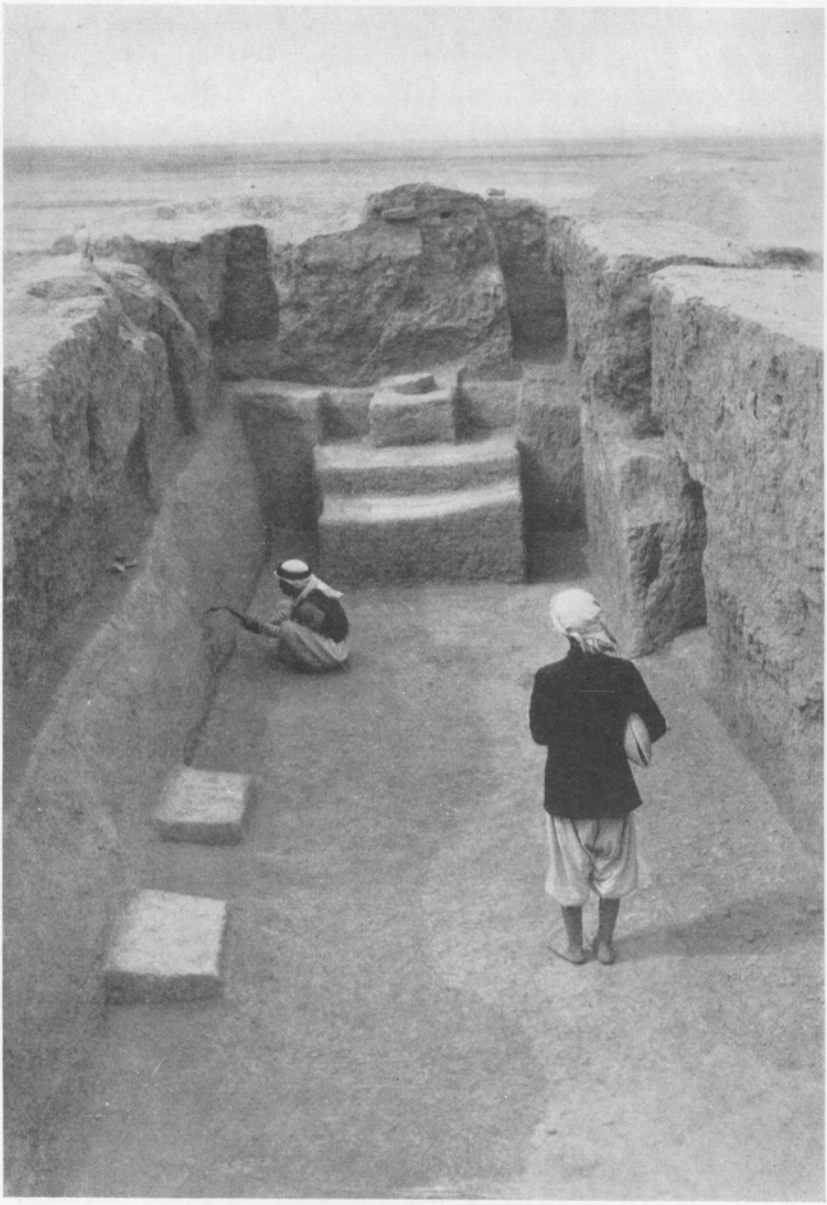


FIG. 38.—The cella of the temple of Abu

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To the north of the sanctuary we found a room containing a large oven (Fig. 37) and accordingly presumed to be a kitchen in which sacred food was prepared.

The outer wall of the building is strengthened with buttresses, but these are of a more elementary form than is customary with temples



FIG. 39.—Limestone plaque with bitumen border inlaid with shell. Scale, 7:10

in later times. That the temple was vaulted over is fairly certain from its shape and the thickness of its walls—no less than one-third of the width of the room which the roof had to span. Since the roof was no doubt built up in sections over a wooden centering, Mr. Lloyd has indicated schematically in his reconstruction the appearance this would

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produce (see front.). Numerous objects came to light in the soil removed during the excavation of the temple and of the court 10 D 16 to the north of it. There were a number of stone maceheads resembling the much more magnificent series recovered in the contemporary temple at Khafaje. Also there were fragments of perhaps a dozen or



FIG. 40.—Fragments (not adjoining) of a limestone stela depicting the nuptials of a god and goddess. Scale, about 2:5.

more stone statues which were placed alongside the walls of the temple in early dynastic times. If appropriate rites were performed such a statue could take the place of a worshiper, who would in this way be continually in the presence of his god. Two small bases found in the temple (Fig. 38) are considered to be supports for such statues, which Mr. Lloyd has consequently restored in that position in his drawing (see front.). The same purpose was served more cheaply by a plaque such as is shown in Figure 39, where a male and a female worshiper are depicted, the latter bringing an offering of loaves of bread and the man carrying an unidentified object. This plaque is unusual not only in its representation but also in that it preserves a border of bitumen with an inlay design formed of triangular pieces of

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shell. Cement adhering to the hole in the center suggested that such objects were pegged to the walls in the sanctuary.

Two more objects were found in the temple: two fragments of a limestone stela showing the sacred nuptials of a god and goddess (Fig. 40) and a cylinder seal showing two Akkadian gods killing a Hydra (see Fig. 43). These, however, can best be appraised in connection with the other religious material found during the last season, since a treatment of these finds in their totality enables us to draw some very important conclusions. Of the cult statue we have no trace. The round base in Figure 38 was put there for the sake of the photograph, but was not found in this position. In Assur the cult figure is supposed to have been a polychrome relief of terra cotta.

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IV

THE RELIGION OF ESHNUNNA IN THE THIRD MILLENNIUM B.C.

In addition to their more tangible results our excavations have established a novel fact which the student of Babylonian religion will have henceforth to take into account. We have obtained, to the best of my knowledge for the first time, religious material complete in its social setting. We possess a coherent mass of evidence, derived in almost equal quantity from a temple and from the houses inhabited by those who worshiped in that temple. We are thus able to draw conclusions which the finds studied by themselves would not have made possible. For instance, we discover that the representations on cylinder seals, which are usually connected with various gods, can all be fitted in to form a consistent picture in which a single god worshiped in this temple forms the central figure. It seems, therefore, that at this early period his various aspects were not yet considered separate deities in the Sumero-Akkadian pantheon. A detailed discussion of this subject has no place in a preliminary report.[1] But since our new knowledge of the Sumero-Akkadian religion results to no small extent from our systematic excavations, our conclusions and some of the more striking evidence may be included here.

The points which I wish to stress are, first, the absolute consistency of the beliefs embodied in the temple and its monuments with those suggested by the objects in the private houses and, second, the fact that these center around one deity. The latter did not rule exclusively, for we have evidence that the existence both of the great mother goddess and of a sun-god, for instance, was acknowledged at Eshnunna at the time. But these deities figure less prominently, and the god worshiped in the temple which we found appears as the central figure of the pantheon. This central figure of the Sumerian and early Akkadian pantheon is a god of fertility, a figure in whom the generative

[1] See *Iraq* I (London, 1934) for the author's study of gods and myths on Sargonid seals.

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force of nature is personified and who is therefore closely connected with the earth, the flocks, and the crops.

The inscribed copper vessels in our hoard actually mention the temple of Abu, lord of vegetation, a title which later applies both to Tammuz and to Ninurta; hence it is almost certain that the vessels were dedicated in the temple which we found. A cylinder seal showing



FIG. 41.—Seal impression As. 32–598, showing a lord of vegetation. Actual size



FIG. 42.—Seal impression As. 32–934, showing divine nuptials. Actual size

a god of vegetation in an original but unmistakable rendering (Fig. 41) was found in one of the private houses.

Tammuz is by no means a lord of plants only; he is also "lord of the sheepfolds" and "shepherd." On seals from other sites a god of fertility is depicted holding plants, but a goat or a ram accompanies him. The latter brings to mind the horns found beneath the statue base in the highest stratum of our temple, many horns found in the private houses of Stratum IV, and the clay imitations of horns and frontal bone found in Stratum V.

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Ninurta, who also is called lord of plants, is called Ningirsu in early texts. His emblem is the lion-headed eagle Imgi; and it may at once be recalled that the hoard of jewelry found in the Akkadian palace adjoining the temple of Abu contained three pendants in the shape of Imgi (see Fig. 29)—pendants such as are not, I believe, known elsewhere. This jewelry may therefore have distinguished its wearer as a devotee of the god worshiped in our temple or perhaps even as a temple official. Moreover, various texts from Lagash describe in full how Ningirsu consummated his marriage with the goddess Bau on New Year's Day with the explicit purpose of insuring the fertility of the crops. We found in the temple a stela and in the private houses a



FIG. 43.—Seal impression As. 32-738, showing gods slaying a Hydra. Actual size.

cylinder seal, both depicting that ritual (see Figs. 40 and 42). I believe that on the seal the object at the head of the couch is a large vase from which project three drinking-tubes such as we found in the hoard of copper objects; for the divine nuptials were, according to our texts, followed by a feast.

Ninurta is also a slayer of monsters. Whether he is the slayer of the Hydra in Figure 43 is uncertain. It depends to some extent on the identification of the Hydra with a dragon shown on the back of an alabaster group (see Fig. 45). This monster, apart from having only one head, is extremely similar to the Hydra, which we know was sometimes pictured in Babylonia with only one head. On the alabaster group (Figs. 44–45) the dragon is obviously an adjunct of the snake-god, whose body is covered with scales but whose head is human. The same god appears on several of our cylinder seals (Figs. 46–47).

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If the Hydra or dragon was the mythological adversary of the snake-god, this would explain why it appears as his adjunct also, just as it does, for example, in medieval renderings of St. George.

It is certain that the name Ningishzida also may be applied to this god. For in a seal impression which shows a fire altar characteristic in scenes depicting the snake-god the caduceus, which we know was the emblem of Ningishzida, appears behind a god (see Fig. 47), while another seal impression shows a god with snakes rising from his legs.



FIG. 44.—Alabaster group showing snake-god and worshipers. Front. Scale, 5:9.

Ningishzida was certainly a god of fertility, as many texts prove. In Figure 46 a plant which is probably grain appears near the altar which stands in front of him; and this is not an isolated instance. Nor is the Hydra of the seal shown in Figure 43 the only link between the snake-god and the temple of Abu, for we found in the temple a fragment of a vessel with a clay snake applied to the spout. It will also be remembered that a vase ornamented in the same way was found with the alabaster group of Figures 44–45 in the chapel of a private house (see p. 19).

From this brief survey it becomes clear that the early pantheon in Babylonia contained as one of its principal figures a god who, as the

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personification of the generative force in nature, was manifest in the fertility of the soil and of the flocks; who lived in the netherworld and often assumed the shape of a serpent; who was exposed to dangerous encounters but succeeded in vanquishing monsters; and the consummation of whose marriage with a goddess was an essential part of the annual ritual. The names Ningishzida, Ninurta, Ningirsu, Abu, and Dumuzi (Tammuz) are in reality but epithets referring to different aspects of this early deity, and tradition may have decided which of



FIG. 45.—Alabaster group showing snake-god and worshipers. Back. Scale, 5:9

these was to prevail in a given locality. The fact that in later times certain of these aspects developed into separate deities so that the relevant epithet became a proper name does not affect the case.

One further interesting conclusion may be drawn from our material: the fertility god whom we meet in so many forms among our finds at Tell Asmar is a Sumerian and not a Semitic deity. The changes in religion and mythology brought about by the arrival of the Semitic Akkadians can to some extent be traced by studying the seals. These changes affect in the first place the character of the sun-god and his place in the pantheon; in Sumerian times he too appears closely connected with the earth and its fertility, as shown by the emblems accompanying him on the seals in Figures 48 and 49. The first of these

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is an exceptionally fine Akkadian seal from Tell Asmar; the second, a seal from Khafaje, proves that the scene in question goes back to Sumerian times. We see in the field of each cylinder among other things a plow, and in Figure 48 the goddess of vegetation actually appears. It should be noted also that the stern of the boat there ends in



FIG. 46.—Seal impression As. 32-646, showing snake-god (with fire altar and plant) being worshiped. Actual size.

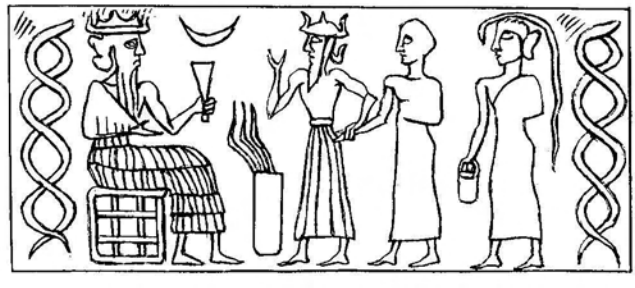


FIG. 47.—Drawing made from seal impression As. 32-711*B*, showing god with caduceus behind him. Actual size.

a serpent's head—a feature reminiscent of another seal,[1a] where the back of the fertility god's throne is ornamented in the same way.

The boat was believed to move of its own accord, and this was suggested by shaping the prow like a human figure holding a punting-pole. The scene depicted is the nightly journey of the sun through the earth from west to east; this idea is the connecting link between the sun-god and a chthonic fertility god. In the Sumerian seal (Fig. 49) the presence of moon and stars makes it clear that the journey takes place during the night, while the human-headed lion tied to

[1a] Otto Weber, *Altorientalische Siegelbilder* ("Der Alte Orient" XVII–XVIII) I (1920) No. 440.

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the prow in Figure 48 no doubt represents a victory of the sun-god over opposing powers. This part of the myth was inordinately stressed by the Semites, to whom the sun-god was pre-eminently *sol invictus;*[2] and this interpretation of Sumerian myths in terms of Semitic beliefs lies at the bottom of much of the inconsistency which we find in later



FIG. 48.—Seal impression As. 32-600, showing the sun-god in his boat on his nightly journey. Actual size.



FIG. 49.—Seal impression Kh. III 922, from Khafaje, showing the same subject as that of Figure 48. Actual size.

Babylonian mythology as well as in such rituals as that of the New Year's festival.[3]

One other aspect of our finds must, however, be mentioned in this report. It is impossible to consider the seal of Figure 43 without being reminded of the fight of Heracles and the Hydra. The comparison holds good even in details. In our case as in the Greek version, the

[2] See *OIC* No. 16, Fig. 27, Nos. As. 31-142, As. 31-854, As. 31-853.

[3] For a detailed discussion of this matter we must refer again to the article in *Iraq* I.

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Hydra has seven heads; four hang limp, but three rear up, projecting their forked tongues against the attacking god. The latter is assisted by a second god, who uses a spear, just as Heracles was assisted by Iolaus. And just as Heracles could not destroy the marsh-dwelling Hydra except by means of fire, so here, while the Akkadian Heracles still uses his spear on the living heads, the flames which will ultimately destroy the monster rise already from its body. Our seal-cutter has, with an artifice widely used in primitive art, combined the successive stages of the combat in this single rendering. A seal impression (Fig.

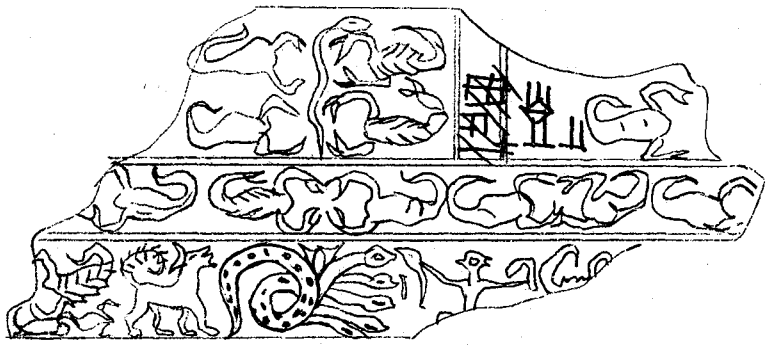


FIG. 50.—Drawing of seal impression As. 32–992, showing a fight with a legless Hydra, as represented in early dynastic times. Actual size.

50) from the early dynastic stratum underneath the palace shows that the Hydra was also conceived in snake form, without legs.

Now there is additional evidence which transforms the resemblance between classical mythology and Mesopotamian mythology as depicted on a seal of the middle of the 3d millennium from a mere coincidence into a highly significant fact. First, on another seal a Babylonian god of fertility, marked as such by ears of corn which sprout from his shoulders, appears possessed of all the attributes of Heracles: lion's skin, bow, and club.[4] Second, Miss G. Rachel Levy has discovered a number of resemblances between the Heracles of Greek mythology and the Babylonian fertility god whom we have been studying. And, third, it seems that intermediate stages in the development of Greek mythology out of Mesopotamian can be established, and that even the period in which Heracles reached Greece

[4] Charles J. Ball, *Light from the East* (London, 1899) p. 15.

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from the East can be determined. We knew that the Greeks considered as forms of Heracles several of the Anatolian and Syrian gods who have features in common with Tammuz. One of these gods is Shandas, worshiped in the southwest of Asia Minor. Now we know, on the basis of archeological and philological evidence, that an immigration into Greece which took place early in the 3d millennium started from that very region, namely southwestern Anatolia. On the other hand Götze[5] mentions that a Luvian-Hittite bilingual text found at Boghazköy translates Shandas—the god of this region, whom the Greeks called Heracles—into Hittite by using the ideogram for "Marduk," the name of the god who represents our Sumerian fertility god in the official pantheon of Babylon.

Miss Levy furthermore insists on the fact that not only the god but also his adversary can be traced in the region between Greece and Mesopotamia, for the newly discovered mythological texts from Ras Shamra prove that Leviathan was a seven-headed dragon. When Miss Levy has fully published the material which she has been collecting,[6] the oriental origin of Heracles will, in the opinion of the writer, be established beyond the possibility of a doubt.

[5] "Kleinasien" ("Handbuch der Altertumswissenschaft," begr. von Iwan von Müller, hrsg. von W. Otto, 3. Abt., 1. Teil, 3. Bd.: *Kulturgeschichte des alten Orients*, 3. Abschnitt, 1. Lfg. [München, 1933]) p. 127.

[6] To appear in the *Journal of Hellenic Studies*, 1934, Part I.

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V

TECHNICAL ACHIEVEMENTS OF THE THIRD MILLENNIUM B.C. AS EVIDENCED AT TELL ASMAR

Since man's mastery over matter progressed farther in early dynastic and Akkadian times than is often believed, it will be useful to discuss here briefly a few relevant discoveries from Tell Asmar.

Glass

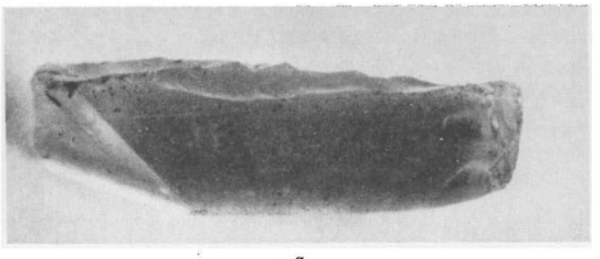
At the very end of the 1931/32 season a small cylinder of glass was found (Fig. 51). It is extremely clear and shows few air bubbles, while the characteristic conchoid fractures are in evidence. Now in Egypt, often considered to be the homeland of glass-making, opaque glass is fairly common in the middle of the 2d millennium B.C.; and there are many beautiful variegated vases and bottles made of this material. Clear glass, however, was not introduced before Roman times. Our cylinder dates, at the latest, to the Gutium period and belongs more probably to that of the dynasty of Akkad. Of this there can be no doubt whatsoever. It was found above 16 E 16 in the layer of débris corresponding to the period of desertion of the Akkadian palace, which, as we have seen, contained almost exclusively objects of Sargonid times. It was found definitely beneath walls of a ruined building which had contained tablets of the 38th year of Shulgi. The foundations of the walls of the building stop half a meter above the level at which it lay. Mr. Horace C. Beck, who has examined it and supplied the photographs used for Figure 51, reports:

> The fact that it is glass is definitely proved by a microscopic chip I took by scratching it with a diamond. Its specific gravity is 2.463. Refractive index about 1.515. This was tested by immersion in benzine ($\mu = 1.504$ approx.) and Sira immersion oil ($\mu = 1.524$); the glass seemed slightly nearer the latter. A microscopic chip was then tested in benzine and Sira mountant ($\mu = 1.52$) by the shadow test and gave identical results.
>
> If this glass really dates to 2600 or 2700 B.C., it is very surprising. Clear blue glass of a very similar colour has been found in the Mediterranean, but it shows a much heavier corrosion and is not older than 800 to 1000 B.C.

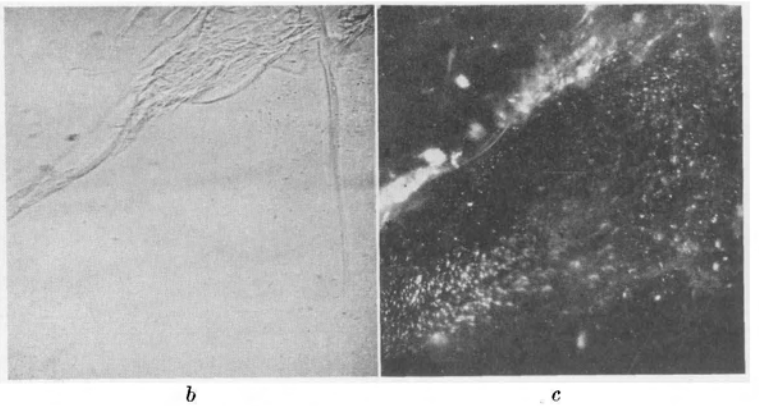
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The specimen from Tell Asmar appears to have been modelled or moulded to its present shape, and has not been cut out of a solid block. The glass is very pure; it has a few small bubbles but is surprisingly free from striae or inclusions of quartz or dirt.

Without spectroscopic or chemical analysis it is impossible to say for certain what materials have been used, but I should think the alkali was prob-



a



b *c*

FIG. 51.—Fragment of a glass cylinder of Sargonid date: (*a*) actual form and size; (*b*) a chip (magnified ×100) seen with transmitted light; (*c*) chip (magnified ×100) seen with reflected light.

ably soda. The colouring may have been accidental, as it is pale. The clearness of the blue suggests that it is due to copper and not iron, but this also should be tested by analysis.

The colouring matter is carried in the form of small spherical particles which have a slightly blue appearance when a number are seen together in reflected light. These particles are in layers, the majority in the same layer being fairly uniform in size; but those in different layers vary greatly in size. The largest particles are about 1/5000 of an inch (.0002 in., .005 mm.). Some

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layers consist chiefly of particles about 1/25000 of an inch (.00004 in., .001 mm.)

Figure 51*b* shows a portion of a chip of glass viewed with transmitted light and magnified 100 diameters. Figure 51*c* shows the same portion of the chip but illuminated with light reflected down from above by a Beck ring illuminator. In the first photograph the particles appear as dark objects, in some cases with a lighter centre; in the second they show as self-luminous stars. These are somewhat confused, as, in addition to the fact that those in the focus may have a slight halation round them, numerous particles in other planes, being self-luminant, show as indistinct blurred images which make the photograph less distinct.

From carefully examining their appearance under different conditions I think that there is no doubt that they are spherical and transparent and have a slightly higher refractive index than the glass.



FIG. 52.—Seal impression As. 32–46, showing the killing of the bird Zu. An ax of Luristan type is stuck in the ground. Actual size.

COPPER AND BRONZE

The early metal industry of Mesopotamia offers points of great interest. Many metal samples have sent been to London by various expeditions to be analyzed by Professor Cecil H. Desch, who directs metallurgical research for the Sumer Committee of the British Association for the Advancement of Science. It transpires that on the whole our objects are made of almost pure copper, with a varying percentage of lead, and include iron or arsenic as impurities. The beautifully cast open-work knife handle in Figure 53 is, however, of bronze, as was to be expected. Analysis of it revealed:

	Per Cent		Per Cent
Copper	88.61	Tin	07.60
Nickel	00.67	Lead	00.94
Arsenic	traces	Iron	00.46

The remainder consisted of oxygen and carbonic and other acids.

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A few bronze objects were found at Ur also which, according to Professor Desch's analysis, contained "a quantity of tin corresponding to a true casting bronze"; but the large majority were of copper. With us the bronze of the knife handle remains an isolated instance. A knife blade from one of the private houses, however, contained 2.8 per cent tin.

Pictorial representations also may give us an inkling as to the technical achievements of the age. We see on the cylinder seal in Figure 52 an elaborate type of socketed ax with several projections at the back, a feature common among the Luristan bronzes. M. Dussaud has drawn attention in a most interesting article[1] to the fact that Naramsin on his stela of victory uses a simple war ax without these projections, and he assigns the more complicated types to a much later age. Our cylinder seal shows, however, that they were already in use in Sargonid times and it confirms, moreover, the view that the Luristan bronzes were stolen from graves of very different periods and that it is therefore useless to try to assign a common date to the whole of that heterogeneous group of metal-work.

IRON

The most unexpected discovery made during the last season was that iron was used for tools before 2700 B.C.—more than fifteen hundred years before the day when the first iron dagger known was sent, presumably by a Hittite king, as a present to the youthful Tutenkhamon of Egypt. The discovery was made while we were still in camp, but needed confirmation, of course, by means of laboratory tests such as we were unable to carry out. While examining the hoard of copper objects (see Figs. 30–32) we were struck by the fact that all were complete except one. The knives, it is true, had lost the bone or wooden cores of their handles, but the silver-foil which had covered the handles was preserved (Fig. 53). The knife handle of open-work bronze was unique, however, in that its blade was completely missing. Since the hoard, as the inscription avers, represents a service of the temple, it was inexplicable that a bladeless handle should have been included in it. Yet the closed pot containing the objects had not been touched by human hands from the moment it was hidden in the brick-

[1] *Syria* XI (1930) 245–71.

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FIG. 53.—Copper knives and bronze handle from the copper hoard. Scale, 1:2

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work, sometime in the 28th century B.C., up to the afternoon of January 25, 1933, when we uncovered it.

It was extremely difficult to extricate so many fragile objects packed together into such a small space, and rain complicated the proceedings. Thus it will be understandable that we did not watch for a slight discoloration of the sand which had found its way into the jar and might be all that was left of an iron blade—particularly as no one could have expected iron to be present in such an early context. Later, however, when the incomplete state of this object began to puzzle us and we were inspecting it carefully in the workrooms, we seemed to find rust present in the slit where the tang of the blade had been inserted. Mr. Delougaz at once carried out two independent tests in the laboratory, each of which established the fact that iron was present in some form. The handle was then submitted to Professor Desch, and after he had carried out a more minute research he sent the following letter to the *London Times:*

To the Editor of the "Times":

SIR,—In the course of the excavations at Tell Asmar, described by Dr. Frankfort in the *Times* of July 10 and 11, a hoard of copper objects was found, enclosed in a pot. Through the kindness of Dr. Frankfort, I have had an opportunity of examining certain of these objects. Among them was a bronze open-work dagger handle, in the slot of which was still wedged a fragment of material evidently derived from the original blade. A lump of similar material was loose inside the handle, being too large to fall through the perforations. On analysis this material proved to be rusted iron, converted as usual by long contact with the earth into a hard, magnetic, crystalline mass. The position in which it was found leaves no doubt that the blade of the dagger was of iron. Moreover, analysis shows that this iron is free from nickel and is therefore not of meteoric origin.

The find is stated to be of the same period as those at Ur and Kish. Among the objects found by Mr. Woolley in the Royal Tombs at Ur was a single object of iron, a small axe, which the writer was able to show had been forged from a meteorite. This was proved by analysis and by microscopical examination of a still unrusted portion of metal. Other iron objects of early date have also been proved, by their high content of nickel, to have been made from meteorites. The occurrence of an iron object of terrestrial origin at such an early date is most striking, and of the first importance for the history of ancient metallurgy.

Yours, &c.,
CECIL H. DESCH

NATIONAL PHYSICAL LABORATORY
TEDDINGTON, MIDDLESEX

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It is very difficult to explain the astonishing fact that iron was smelted and used for tools at such an early date. Even in the time of Amenemhet III (about 1820 B.C.) it was such a rare metal in the eastern Mediterranean region that a ring of gold found in a royal tomb at Byblos contained a small inset of it, as though it were considered the rarer and more costly metal. It seems to me that an explanation may be found if we remember the intimate relationship which had existed from early times between the metallurgy of Mesopotamia and that of Transcaucasia and Armenia. The typological arguments for proving this connection have recently been expounded.[2] Professor Desch writes to me as follows:

. . . . It is clear that more than one source of copper is represented in the finds from the early levels in Mesopotamia. The presence of arsenic in so many suggests a northern origin, as, although I have not been very successful in obtaining ores, arsenical pyrites, often containing a little nickel, are known to occur through parts of Anatolia, Armenia, and Azerbaijan. I am constructing a map showing known occurrences, but unfortunately there are very few analyses.

Now Transcaucasia and Armenia formed a great iron-producing center in classical antiquity. During the last century a great number of antiquities have been excavated in this region, among them many weapons and tools of iron. The tombs in which the latter were found were consequently assigned to the Iron Age, after 1000 B.C. But it has always seemed to me that certain objects found in these tombs, especially pottery, argue against this late dating. Thus it seems to me very likely that the iron blade of our knife may have been an importation from the north and that iron was very occasionally used in Armenia during the 3d millennium B.C., but was not exported, because it was less serviceable than well hammered copper or bronze. The heroes in the Edda have to stop every now and again in the middle of a combat to straighten out their iron swords, which have become bent. The spreading of the use of iron in the second half of the 2d millennium would then be due *not* to the discovery that iron could be obtained by the smelting of certain ores (a knowledge which we presume to be much older) but to the discovery of new methods for casting and working that metal.

[2] Henri Frankfort, *Archeology and the Sumerian Problem* ("Studies in Ancient Oriental Civilization," No. 4 [Chicago, 1932]) pp. 52–55 and Fig. 7.

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VI

KHAFAJE

The work of 1932/33 at Khafaje can be understood only if the very peculiar difficulties presented by this important site are called to mind.[1] Except at one or two points the temple inclosure remains in the same stage of excavation which had been reached by the end of the season of 1931/32. For further progress in our work here means destruction, and before descending into the deeper strata we wished to explore the immediate surroundings of the oval and establish its relationship with the adjoining buildings. A comparison of Figure 54 with Figure 39 of our previous report[2] shows clearly the extent of Mr. Delougaz' work during the season of 1932/33.

In the background near the small isolated dump it will be seen that some work was done to connect the inclosure walls, which have almost disappeared at this point owing to the fall of the ground. On the right-hand side of the picture the remains of houses abutting on the inclosure wall surrounding House D were uncovered. In the left foreground we see the ruins of other houses further mutilated by illicit diggers in their search for antiquities before the Oriental Institute obtained in 1930 a concession to dig this site, undertaking at the same time to guard it summer and winter at its own expense.

Now it should be noted that the oval temple inclosure did not stand isolated, but was evidently surrounded on all sides by private houses, which in certain cases were actually built against the inclosure wall. More often, however, they were separated from it by a narrow passage. For although none of the houses so far excavated can be considered as contemporary with the oval, since all belong to a period later than the last rebuilding of which we have found traces, nevertheless when one studies the air mosaic made for us by the Royal Air Force (55th Squadron) it becomes almost certain that the inclosure still existed in some form when the houses were built. For in Figure 54 it can be seen quite clearly how the streets in the top stratum were planned, either converging upon the oval or running concentrically with it. The bulk

[1] *OIC* No. 16, pp. 58–61. [2] *OIC* No. 16.

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FIG. 54.—Air view of Khafaje from the northeast

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of the inclosure walls, though now denuded to a level below the foundations of the adjoining houses, must still have been standing to a considerable height when the houses were built.

The locus 4 K 42 is especially interesting (Fig. 55). The wall through which the drain passes is the outer inclosure wall which encompasses House D.[3] This drain was built at an advanced stage in the history of the oval and ends in a pottery shaft. Below the level of the



FIG. 55.—Drain passing through inclosure wall of House D at Khafaje, at locus 4 K 42.

drain we actually struck the ancient surface of the soil sloping away from the oval. It therefore follows that the houses to the north of the oval, that is, to the right in Figure 55, and the graves found in them were built a considerable time after the oval, when the level of the soil outside the inclosure had risen about $\frac{3}{4}$ meter. It would be difficult to estimate the time required for such a change of level, but we know that the tendency is to exaggerate such estimates. Private houses, built of sun-dried bricks, need frequent repairs and reconstructions; whereas the more stoutly built public edifices, which are also kept in a better state of repair, may have a considerably longer

[3] See *OIC* No. 16, Fig. 40.

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life. And since each reconstruction of a private house implies a rise in the level of the floor, the height of the latter increases comparatively rapidly. Thus Khafaje is only one of a number of places where we find that a sanctuary founded originally on a more or less elevated piece of ground appears after a lapse of several generations to be situated at a level lower than the private houses around it.



FIG. 56.—Grave B at Khafaje

The graves (e.g., Fig. 56) contained weapons, ornaments, and pottery similar to those found in the graves farther west during our first campaign.[4] The facts that the houses are built of plano-convex bricks and that the contents of some of the graves are similar to those of Cemetery A at Kish (which belongs to the early dynastic period) suggest that these were contemporaneous. Other graves, however, were plainly of a later date and were dug down from a higher level; this is easier to understand if we remember that above the houses

[4] Frankfort, Jacobsen, and Preusser, *Tell Asmar and Khafaje. The First Season's Work in Eshnunna, 1930/31* ("Oriental Institute Communications," No. 13 [Chicago, 1932], hereafter abbreviated to *OIC* No. 13) Figs. 51–53.

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FIG. 57.—Two stone amulets and an engraved inlay of bone. Actual size



FIG. 58.—Pot with the figures of two rams drinking from the spout. Scale, 3:10

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which we find preserved there must once have existed later ones belonging to the Sargonid period. In 1931/32 inscribed stone vases bearing the name of Rimush were found on the surface of the soil in the gateway, yet they evidently belonged to a stratum above it now no longer existing. A new piece of evidence from a stratum which the weathering has destroyed consisted of fragments of an Akkadian

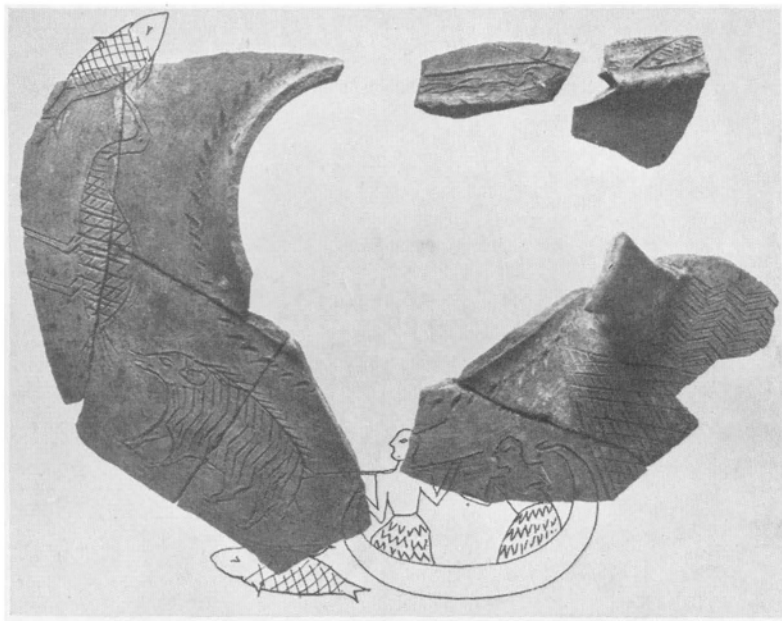


FIG. 59.—Fragments of a vase picturing a boar hunt in the marshes. Scale, 2:5

tablet, which were found on the floor of one of the houses. Now these houses, as has been said, are built of plano-convex bricks, a material which is generally believed to have fallen into disuse before Akkadian times. The presence of this tablet would accordingly be somewhat disconcerting, if we did not at once realize the probability of its having descended from a higher level when graves or drains began to penetrate the earlier strata.

The graves and the soil around them produced a number of interesting objects. Here we can mention only a few. In Figure 57 we show two stone heads, probably of demons, worn as protecting amu-

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lets. The larger of the two has eyes made of shell inlaid in bitumen. Figure 58 shows a vase put together by Mr. Delougaz from hundreds of fragments. On either side of the spout there is a figure of a ram, presumably symbolizing Tammuz. Fragments of another vase (Fig. 59), of the well known "goddess"-handle type, show a curious hunting scene in the marshes, where among fishes and long-legged water birds two Sumerians in a boat are spearing a wild boar. Such a scene occurs once or twice on cylinder seals from Fara and elsewhere, but is depicted here with exceptional vividness. The bodies in the graves in which these objects were found were buried in a crouching position.

The private houses bordering on the oval to the north are also in poor condition. Only to the northeast do we find remains which are better preserved (Fig. 60). Here, as everywhere, we have uncovered only the ruins nearest the surface. The uppermost stratum (black in Fig. 60) could not be traced right up to the inclosure walls on the northeast side of the oval owing to the slope of the mound and the resulting denudation. Any walls which we have uncovered belonging to deeper strata are crosshatched in Figure 60, since these cannot yet be assigned to separate periods.

The buildings in the top layer, all built of plano-convex bricks, present some features of exceptional interest. We have to deal here with a quarter of the town which was either especially fortified or built with the idea of restricting and controlling the movements of its inhabitants. It is surrounded by a strong wall which may of course be assumed to have continued as far as the buttressed outer inclosure wall of the oval, which shows in O 44–46 (Fig. 60). Within this restricted area the houses are arranged with the greatest economy of space. Instead of the haphazard layout of houses usual in ancient oriental towns, we find streets at right angles to each other, dividing the houses into blocks. It is a great pity that our plan is incomplete, and especially that the principal entrance into this walled quarter of the town is lost.

The house of which 12 O 44 is the central room and which belongs to a somewhat earlier layer shows that the type of dwelling which we have encountered at Tell Asmar was in use at Khafaje also. The same type is found in the walled quarter. But there the houses are reduced to their simplest form. The entrance leads directly into the

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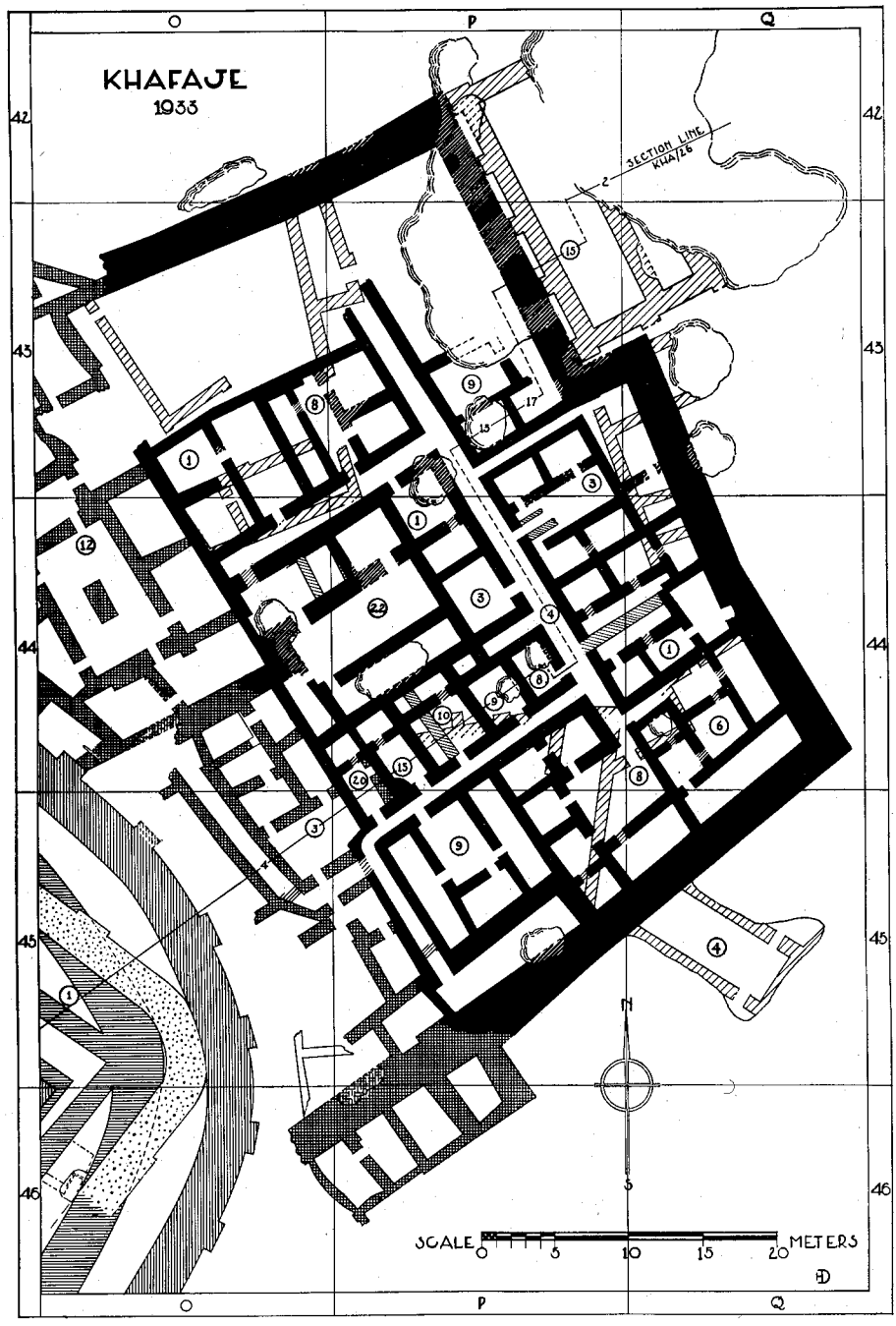


FIG. 60.—Plan of the walled quarter at Khafaje. Scale, 1:500

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central room (e.g., 9 P 45), or one entrance passage serves two houses (e.g., 8 Q 44 and 6 Q 44). Many "houses," such as 10 P 44 and its neighbors on each side, for instance, consist of only one or two rooms. From the apparent poverty of them all one receives the impression that the inhabitants were possibly dependent upon the temple, so that their quarter of the town was laid out by order of the temple authorities. Yet the few objects (other than pottery) which were found here are not at all of bad quality. Figure 61 shows two pendants, one of lapis lazuli and the other of silver, exquisitely modeled and resembling in style a gold pinhead in the shape of a monkey found by Woolley at Ur. An engraved bone inlay (see Fig. 57) shows a Sumerian warrior completely equipped with copper helmet, battle-ax, and coat of fleece.



FIG. 61.—Amulets in the shape of monkeys, of lapis lazuli and silver respectively. Actual size.

In the north of the walled quarter irreparable damage had been done by native antiquity-thieves before our work started. Figure 62 shows some of the holes made by them in the mound—holes which we cleaned out this year in order to obtain some idea of the extent of the damage done. Such pits are sometimes over 5 meters deep, and odd sherds of polychrome pottery show that the thieves actually penetrated beneath the remains of the early dynastic period and cut into strata belonging to the earlier—that is, the Jemdet Nasr—period. A fine polychrome pot bought by the British Museum no doubt comes from this part of our site. We are just able to recognize the buttressed wall in P 42–43 as the outer wall of a temple, but the remainder of this building was so completely obliterated that its architectural and cultural arrangement will forever remain unknown. We may, however, assert with confidence that much if not all of the statuary which fell into the hands of antiquity-dealers before our work started in 1930 was derived from it. Only a few small objects remained to be found by us in the soil which had been worked over by the robbers. The most interesting of these, perhaps, is the small figure of the mother goddess (Fig. 63), made not of alabaster but of a stone resembling marble. The type is not otherwise known in Mesopotamia, but occurs in the Aegean

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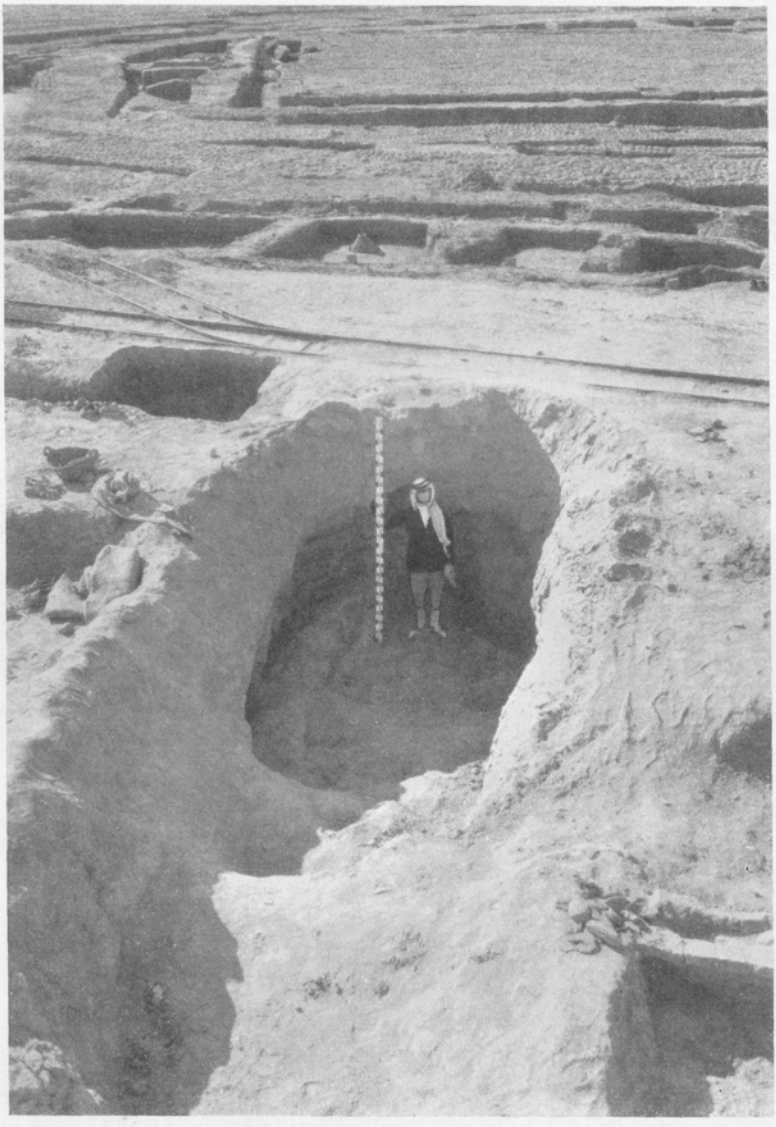


FIG. 62.—Robber holes. In the background is the sacred inclosure with the temple platform.

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region and from there eastward as far as Transcaspia. Thus again proof is offered of the connection with the north which was maintained by the people of Mesopotamia in the early dynastic period. Another interesting small object is a figure of a lion, made of mottled stone, probably belonging to the Jemdet Nasr period. Finally, it should be noted how the wall of the inclosed quarter turns in to pass to the west of the temple.

On the southeastern side (4 Q 45 in Fig. 60) we found, in tracing the latter wall, a room which our unofficial predecessors had not touched. It appeared to have been a sculptor's workshop (Fig. 64). Not only were there whole statues (e.g., Fig. 65), but various unfinished parts, evidently intended to be dovetailed on to a broken original in order to replace a damaged face or beard or hand, suggested that repairs had been here undertaken. These fragments were firmly imbedded in lumps of bitumen, which would yield sufficiently under the strokes of the chisel to prevent the limestone or alabaster from cracking, but would hold firmly that part upon which the sculptor was at work. In Figure 66 the small head on the left shows the groove cut by the chisel to give the deepest surface to which the sculptor intended to work. Next we see a lump of stone upon which only the very first preliminary marks are incised: the line of the eyebrows is marked horizontally, the position of the mouth is fixed, and two vertical lines delineate a space to be left uncut and to be shaped later into the nose. The other two fragments show two stages in the treatment of the hair.

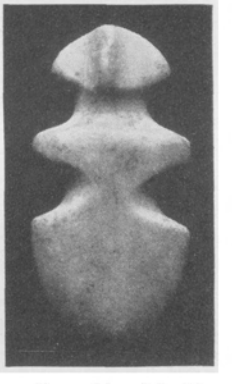


FIG. 63.—Marble figure of the mother-goddess. Actual size.

As to the temple inclosure itself, Mr. Delougaz had to spend much time investigating details which needed elucidation before the upper layer could be removed. Here we report only on the work carried out at the northwestern end (Fig. 67). It will be remembered that only one entrance (dotted in Fig. 67) was discovered in 1931/32, though we had found three successive temple platforms and inclosure walls. We were uncertain to which of the three building periods this one gate-

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way belonged.[5] It will be seen that beneath this an earlier gateway (horizontally hatched in Fig. 67) has now been discovered. Figure 68 shows in the right-hand background the southern side of this earlier gateway, with the steps of the entrance partly free and partly covered by the inner wall of the later gate chamber. The earlier gateway shows a distinctly earlier type of fortification. It is placed flush with the wall surface, and there is an inclosed gate chamber no doubt open to the



FIG. 64.—Sculptor's workshop, as discovered

sky so that attackers who had penetrated the outer gate could be dealt with by the defenders from the top of its walls. In the later gateway this function was fulfilled by flanking towers, a great improvement, since the attackers could now be repelled before they reached the outer gate by a larger number of defenders accommodated above it. The newly discovered early gateway belongs to the earliest oval.[6] The later gateway seems definitely to belong to the latest phase of the inclosure,[7] when the walls were straightened but kept their rounded corners.

[5] See *OIC* No. 16, Fig. 40. [6] Indicated in solid black in *OIC* No. 16, Fig. 40.
[7] Hatched horizontally in *OIC* No. 16, Fig. 40.

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In front of these two gateways stone steps (*A* in Fig. 67) belonging to a third have been discovered. The last belongs to the so-called "outer oval," the buttressed oval wall which may, as we now believe,



FIG. 65.—Statue of a woman, from the sculptor's workshop. Scale, 1:4

have been at some time coexistent with the earliest oval and which was still standing when the straightened, latest inclosure was built.

Of the objects found during the work on the gateway, four deserve mention. The ceremonial macehead of Figure 69 shows two lions facing in opposite directions—the same motive as one published in our

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first report.[8] In the latter case the motive was treated analytically, the lions appearing as mere ornaments added to the macehead; but in the new example there is a more primitive rendering, the macehead being entirely wrapped in the coats or manes of the two lions, whose

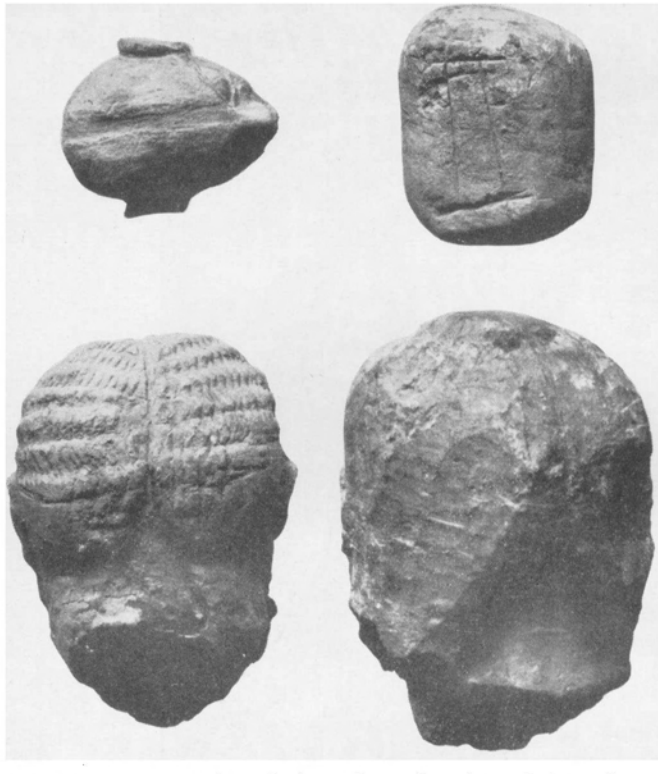


FIG. 66.—Four unfinished heads from the sculptor's workshop. Scale, 1:2

heads only project at the top. Figure 70 gives an impression from one of the finest of the early cylinder seals found at Khafaje. In the open space above the scorpion the name of the owner could have been inscribed. Another notable object is a piece of limestone inlay, part of a bearded figure worked in unusual detail (Fig. 71). Figure 72 shows a square plaque, still incomplete, though two fragments found in 1932/33 have now been added to two found in our first season. The

[8] *OIC* No. 13, Fig. 54.

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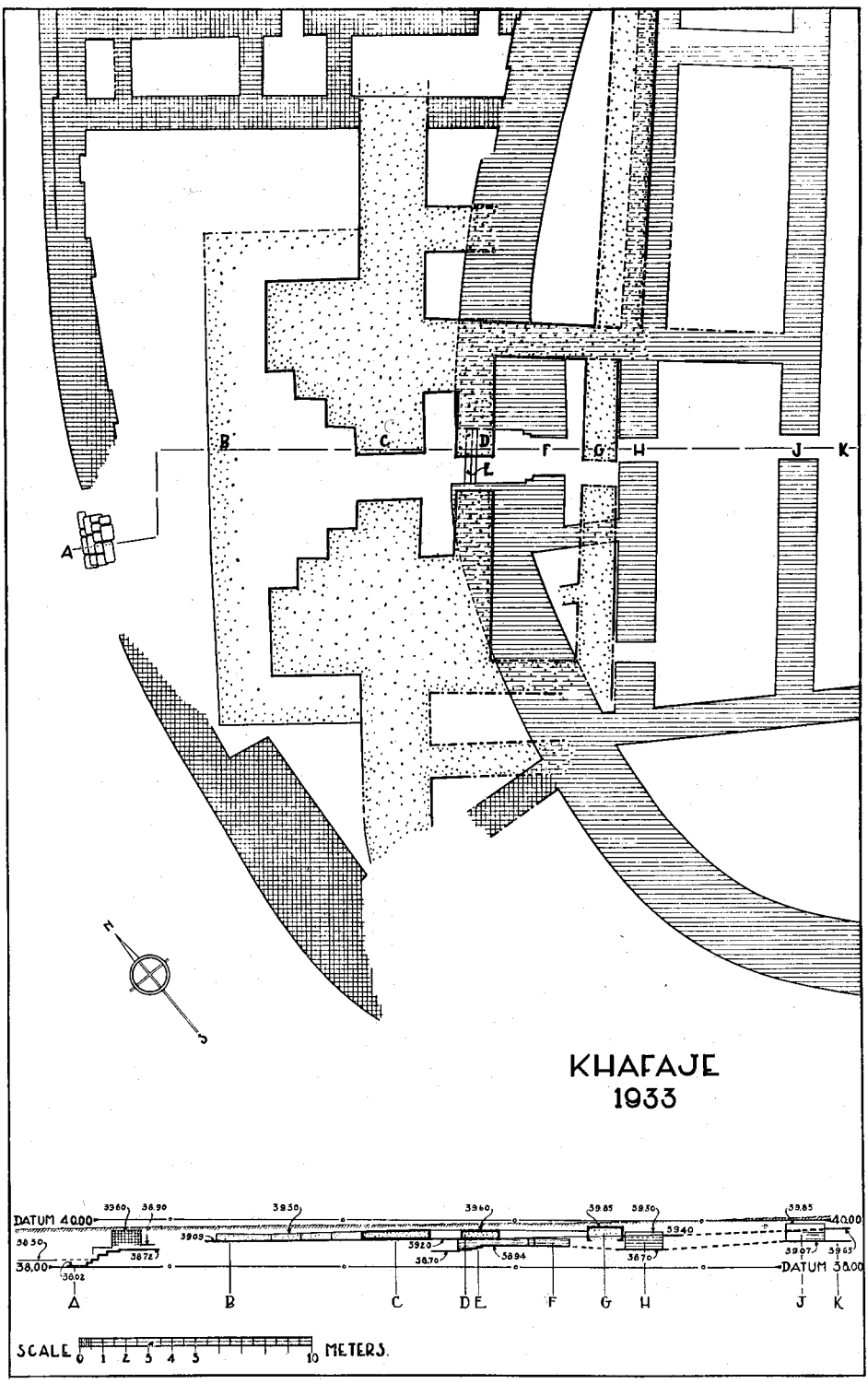


FIG. 67.—Plan and section of the gateways of the sacred inclosure. Scale, 1:300

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FIG. 68.—Earlier gateway appearing under later walls



FIG. 69.—Limestone macehead with lions. Scale, 7:10



FIG. 70.—Seal impression Kh. III 265, showing animals in combat. Actual size

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FIG. 71.—Inlay of limestone



FIG. 72.—Fragmentary plaque of black stone, cut to receive inlays. Scale, 1:4

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plaque has a hole in the center and belongs to the same class as that shown in Figure 39. It was no doubt put up in the temple to commemorate an unusually rich gift of goats and sheep by some devotee of the god. The figures of the animals were once inlaid with finely carved pieces of shell or white stone, as we know from similar inlaid objects found at Kish. Since fragments of this object have been found in different years, it seems possible that it may yet be completed.

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VII

KHORSABAD

The work at Khorsabad proved exceptionally productive, largely as a result of the fact that Mr. Loud was able to work continuously from the end of November until the middle of April instead of having,

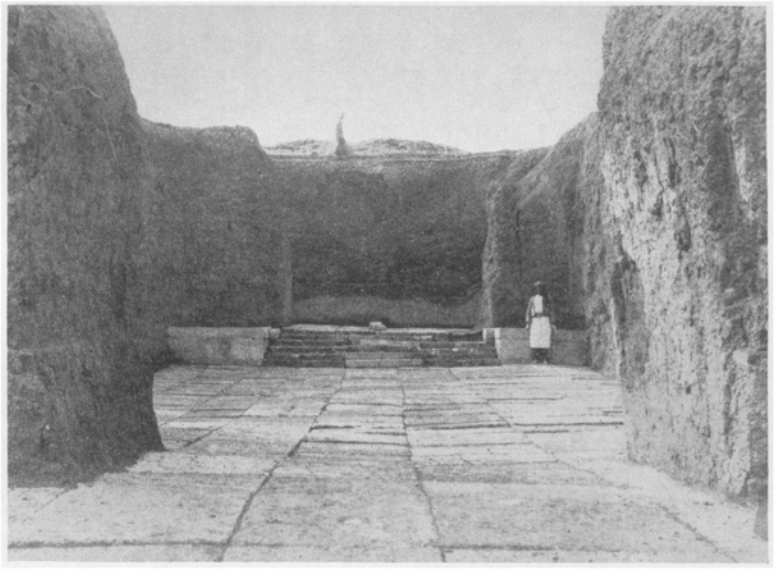


FIG. 73.—Sanctuary of the temple of Sin at Khorsabad

as in former years, only the last half of our season assigned to excavations in the north. The previous work in Sargon's palace was completed this season by the clearance of one of the three great palace temples, namely that dedicated to the moon-god Sin. This spacious sanctuary when completely excavated proved to be one of the most imposing monuments extant in Iraq. Unfortunately portions of the mud-brick walls, collapsing after each shower of rain, tend here to spoil an effect of which the best photographs can give only a very imperfect impression (e.g., Fig. 73). The magnificent stone paving should be noticed, also the elevated niche, which has developed almost

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FIG. 74.—Air view of the temple of Nabu at Khorsabad

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FIG. 75.—Air view of the temple of Nabu and part of the palace hill, Khorsabad

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into a separate room, for the cult statue. Two tableaus of glazed bricks were taken down. After being carefully treated with ambroid, a celluloid preparation, each brick was marked and numbered, and each group of eight bricks was placed with wadding in a specially made case. Numbers corresponding to those on the bricks were entered on enlarged photographs showing the tableaus in position, so that it will be possible to reconstruct them in Baghdad and Chicago after the glaze has been treated and restored. Though the condition of these tableaus, as soon as they were removed from their original positions, proved to be much worse than was at first thought, as is often the case with such relics, it will be worth while trying to preserve and to display to our contemporaries a monument which originally must have been of great splendor.

A small hill to the west of the artificial mound upon which Sargon founded his palace had attracted the attention both of Victor Place and of ourselves when we first worked at Khorsabad in the winter of 1929/30. A few walls had been traced, but we had gained no impression as to the character of the building. Mr. Loud returned to this part of the site, and the air photographs (Figs. 74–75) show the result of his work here. The enormous building which he traced is the temple of Nabu, the god of knowledge and the patron of scribes and historians. The scale of the temple can be judged from Figure 74, where two men are standing in the road in front of it. The area covered by the building is 420 feet long by 250 feet wide. The walls, about 10 feet thick, are preserved to a height of 9–12 feet and were no doubt originally more than twice this height. All this solid brickwork of sun-dried bricks was plastered white above a black dado and gorgeously ornamented with double- or triple-recessed niches alternating with groups of three, five, or seven half-columns (Figs. 76–77). A much discussed form of decoration, consisting of large ornamental clay nails (*ziggatu*), was also found at Khorsabad this year and, what is more, found in position—to the best of my knowledge, for the first time. In Figure 77 such nails can be seen set in a row of baked bricks. The floor of the temple is still more than 2 meters below the level of the soil, and the niches appearing beneath the band of baked bricks continue downward. Pairs of statues of minor deities, three-quarters life-size and similar to

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FIG. 76.—Excavating white-plastered niches and half-columns on the outside of the Nabu temple wall.

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those found last year in the palace temple of Shamash,[1] flank the doorways which lead through two impressive open courts to the temple proper. Thus material is rapidly accumulating which will make it possible to reconstruct an Assyrian temple in detail.

The general plan and situation within the town can best be seen from the two air photographs (Figs. 74–75). In these the two courts



FIG. 77.—Ornamental clay nails inserted in a row of burned bricks on the outside of the Nabu temple. The niches continue below.

of the Nabu temple can be seen and, on the left-hand side, various subsidiary buildings. In the lower right-hand corner of Figure 75 appears the artificial hill upon which Sargon's palace was built; the excavated Sin temple is especially clear. An indication of the importance of the Nabu temple is that its entrance faces the main entrance of the palace and is built as near as possible to it. Just above the top corner of the Nabu temple and beyond the modern road to Nineveh and Mosul, which crosses the photograph obliquely from right to left, appears the town gateway excavated by our expedition in

[1] *OIC* No. 16, Fig. 65.

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1929/30. It is situated close beside a branch of the river Khosr. On the right appears the modern village of Khorsabad.

Minor sanctuaries are included among the rooms which surround the courts of the Nabu temple, and there perhaps we may find the library of the king. We know from colophons on certain tablets that such a library existed. But it may have been removed to Nineveh by

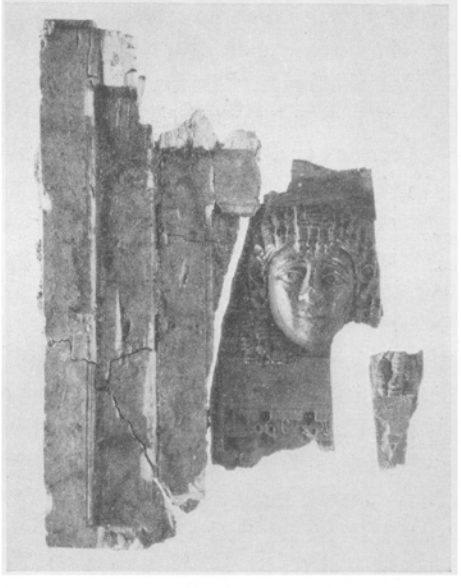


FIG. 78.—Ivory work from a casket. Actual size

Sargon's son Sennacherib when, after the death of its founder, the residence at Khorsabad was deserted. If this was the case, the scribes of Sennacherib left behind a document which, whatever its contemporary value, means a great deal to us. It is a tablet measuring 18 by 14 cm. covered on each side with four columns of cuneiform characters and containing a list of the kings of Assyria. The importance of this document may be estimated if we remember that the chronology of rulers, which constitutes the framework of the history of Assyria, heretofore went back only to the first centuries of the 2d millennium B.C., before which date the names of no more than four kings were known; and three of these were unrelated to contempo-

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rary history or to earlier or later rulers. Our new tablet, however, enumerates in unbroken succession the kings of Assyria from the latter half of the 3d millennium down to Ashurnirari V (753–746 B.C.); and the earliest king of whom we previously knew even the name, Ushpia, appears in our new list as the last of a dynasty of nine. In the whole record about ninety-five kings appear. Starting early in the 2d millennium—from Belbani the son of Adasi, to be exact—the list preserves the regnal years of every king; and this is the case even with a number (but not all) of the earlier kings. The text is arranged in two groups of two columns each. The first group gives the names and regnal years of the kings; the second, their fathers' names, with occasional brief remarks of a historical nature. It is not practicable here to anticipate further the final publication of the list, but it will follow this report with the least possible delay.



FIG. 79.—Ivory head from a casket. Actual size.

Among the other objects found in the Nabu temple were a number of ivory fragments which had served as decoration on caskets (e.g., Figs. 78–79). These had been burned, but the better preserved fragments are particularly fine pieces of carving. They belong to a widespread family of ivory work known from Nimrud, from the palace of Shalmaneser III at Arslan Tash in Syria, from Samaria, and even from Perakhora on the Gulf of Corinth. A Phoenician origin of some of these works is certain. To what extent there was also a native Mesopotamian school of ivory carving is still undecided. The importance of our pieces lies in their well established date. It is true that it becomes more and more clear that certain parts of Sargon's residence continued to be used after his death, but it seems unlikely that such use lasted long. In fact, the ivories cannot be dated either much before or much after 700 B.C. They were found in a doorway leading from the first to the second court of the Nabu temple, and we expect to find more during the coming season. For up to the present we have traced the outline only of the courts and rooms of the temple (see Figs. 74–75).

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VIII

TEPE SHENSHI AND JERWAN

A few words only must be added about the two sites where we worked after the camp at Tell Asmar had been closed. One was Tepe Shenshi (Fig. 80), a mound situated about 800 meters south of the southern town wall of Khorsabad. It contained in its upper layers a fortified building, or perhaps a small settlement, of the middle of the 3d millennium B.C. A house with arched doorways, bronze tools and weapons (Fig. 81), seals, and pottery (Fig. 82) forms interesting evidence of a stage of culture in northern Mesopotamia so far known only through the successful exploration of Tepe Gawra by the joint expedition of the University of Pennsylvania and the American Schools of Oriental Research. But our investigations were so much interrupted by rain during the early part of April that their discussion is better postponed until we have cleared up various outstanding points.

The work at Jerwan, which has had most important results, is also mentioned only summarily here, since Dr. Jacobsen and Mr. Lloyd have already prepared a final publication. Toward the close of the season of 1931/32 a workman had reported inscribed blocks of stone in the hills northeast of Khorsabad. Dr. Jacobsen in following up these indications came in an almost deserted valley upon the remains of one of the greatest Assyrian engineering feats on record.[1] Sennacherib reports in an inscription found at Bavian how he renovated and enlarged his residence and how he brought water from the hills to irrigate the fields around Nineveh, the cultivation of which had until then been dependent on rains, even as it is today. We have now discovered that Sennacherib's engineers made as much use as possible of natural watercourses, which, however, they connected by a series of eighteen canals, bringing the water from a spot 30 miles north-northeast of

[1] An account of visits to these ruins by other scientists—including Layard, King, Bachmann, Olmstead, Speiser, Chiera, and Thureau-Dangin—is contained in our final publication, which is now in press: Jacobsen and Lloyd, *Sennacherib's Aqueduct at Jerwan* ("Oriental Institute Publications," Vol. XXIV). The true nature of the monument had not, however, been recognized before.

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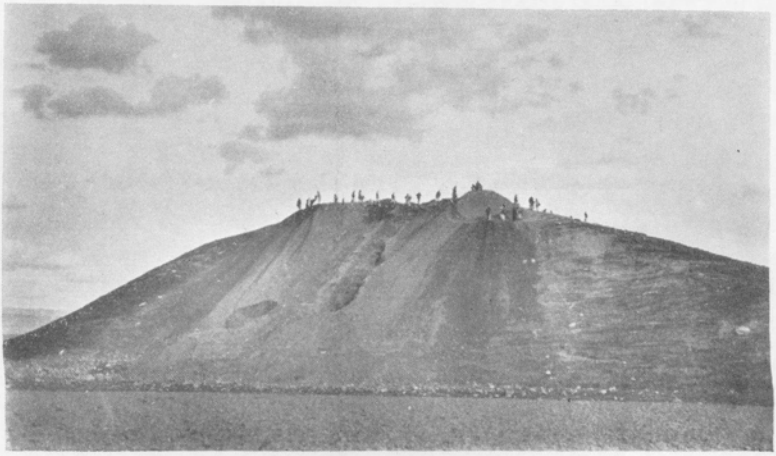


FIG. 80.—Tepe Shenshi

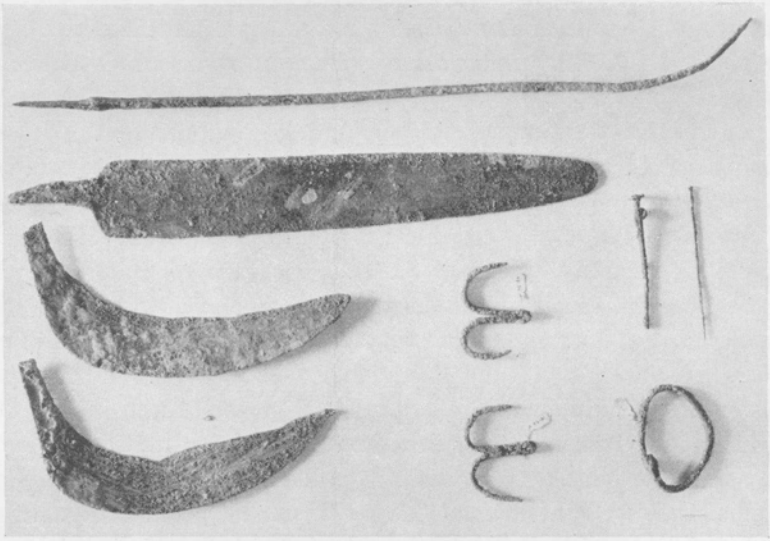


FIG. 81.—Sickles, sword, fishhooks, lance, and pins from Tepe Shenshi. Scale, 1:6.

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FIG. 82.—Pot and lid of fritty red ware from Tepe Shenshi. Scale, 1:2

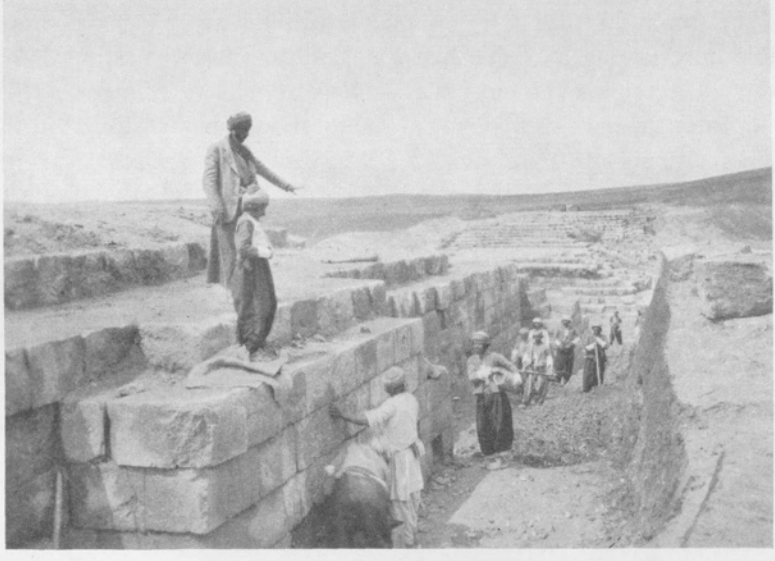


FIG. 83.—Work on the aqueduct at Jerwan, with an inscription showing beneath the hand of the workman in the foreground.

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Nineveh (as the crow flies) down to the river Khosr, a small stream which passes Khorsabad and joins the Tigris near Nineveh.

At a place called Jerwan, pointed out to us in 1932, where today some fifteen families of Yezidis live near a mountain stream, one of Sennacherib's channels had to cross a deep ravine. Here, as at Khorsabad, one cannot but be deeply impressed by the scale upon which Assyrian rulers conceived their plans. An aqueduct of magnificent ashlar masonry was built across the ravine (Fig. 83). It measured no less than 900 feet in length and 75 feet across its greatest width from pier to pier. Above the masonry a layer of concrete was laid down and covered by a pavement over which the water flowed between parapets 9 feet wide. The actual stream was crossed by five pointed arches of 9-foot span, one of which is almost completely preserved. The piers between the arches have semicircular breakwaters; and these, as well as the flanks of the aqueduct, bear Sennacherib's proud record of his work, giving many details which are new to us. It is a most curious fact that before the king's inscription had been uncovered, we became acquainted with a local legend which preserves in the shape of a romantic folk tale both the purpose of the great construction at Jerwan and the places which marked the watercourse. The survival of such an oral tradition for twenty-six hundred years is perhaps possible only among a people like the Yezidis, whose so-called "devil worship" retains to this day ritual usages derived, like the name of their god, from the immemorial cult of Tammuz, who is identical with the Syrian Adonis and the Egyptian Osiris. But it is significant that we had some difficulty in extracting this story from the inhabitants of Jerwan, because they themselves deemed it a fantastic tale, the achievements of Sargon and Sennacherib seeming quite fabulous to the present-day inhabitants of their country.

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