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## SECOND PRELIMINARY REPORT UPON THE <br> EXCAVATIONS AT TEL UMAR, IRAQ

CONDUCTED BY<br>THE UNIVERSITY OF MICHIGAN<br>THE TOLEDO MUSEUM OF ART<br>AND

THE CLEVELAND MUSEUM OF ART

## LEROY WATERMAN, DIRECTOR



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THE TOLEDO MUSEUM OF ART
AND
THE CLEVELAND MUSEUM OF ART

LEROY WATERMAN, Director

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## FOREWORD

Excavation at Tel Umar during 1930-31 began on September 13 and continued until January 25, 1931, with a staff of ten persons, including Dr. N. C. Debevoise, Parthian specialist and photographer; R. H. McDowell, field manager; Mrs. McDowell, house manager; S. Yeivin, field archaeologist; N. E. Manasseh, architect and surveyor; Robert J. Braidwood, artist and draftsman; Harry G. Dorman, Jr., recorder and general assistant; and Donald Waterman, chauffer and general helper.

The field force employed varied from three to four hundred workmen. The rental in December of 1,200 feet of light railway and four dump cars from Iraq Railways greatly facilitated the removal of débris. The main working force was concentrated upon Block B and its immediate environs and succeeded in completing work on Level I, partly excavated the previous season, together with the major portion of Level II. A few rooms were also cleared in the southern extremity of the block in Level III.

In addition, an extensive study was made of the stratification of the mounds by sinking a series of pottery pits or soundings at widely separated points. Four of these were carried down to water level. The potsherds were gathered and plotted at one-meter intervals. Pottery was found thirty-eight feet six inches below the surface of the mounds, but this was true in only one instance, and the lowest sherds were separated from the next stratum above by about six feet of alluvial flood deposit. The final details of this investigation have not yet been completed.

The main excavation, apart from the architecture and burials uncovered, resulted in the recovery and registry of over 3,500 objects of great variety and value. Approximately 300 new pottery types were listed and drawn.

Inscriptional material includes a cuneiform tablet, a fragment of a Greek inscription, cuneiform and Greek brick stamps, a great quantity and variety of coins, both bronze and silver, and over 250 bitumen seal impressions, many of which bear Greek legends.

The most notable objects of art consist of two caches of Parthian jewelry, colored plates of which appeared in the Illustrated London News for February 13, 1932.

The work of the expedition in 1930-31 was financed mainly by the joint contributions of the Toledo Museum of Art, Ohio, and the Cleveland Museum of Art.

During the past season (1931-32) the financial support has been supplied entirely by the Cleveland Museum.

The field season for 1931-32 lasted from September 28 to April 1, 1932, although excavation proper closed on February 1. The staff included N. E. Manasseh, architect; S. Yeivin, field archaeologist; Mrs. Leroy Waterman, draftsman and recorder; and William C. Bellingham, photographer and general assistant. My daughter, Dorothea Waterman, acted as bookkeeper, typist, and house assistant. During the latter part of the season the staff was augmented by Dr. and Mrs. A. Saarasalo of Terusalem. Dr. Saarasalo gave able assistance in the field and Mrs. Saarasalo no less valuable service in freehand drawing. The labor force varied from 150 to 250 .

The season's work resulted in reclaiming over 4,000 registered objects and about 175 new pottery types. Architecturally Level II of Block B was completed and Level III cleared to the foundations. In addition, about six weeks were spent with a relatively small force upon the so-called ziggurat of Tel Umar, the artificial hill that gives the local name to the complex of mounds.

Inscriptional material recovered during the season consists of the same range of written materials as during the previous season, though the number of sealings bearing Greek legends was few. Another find is a tiny fragment of an Egyptian
inscription. A note on it has been submitted by S. Yeivin to Annales du Service (Cairo), XXII (1932), 151-152.

A volume on the Parthian pottery of Seleucia prepared by Dr. N. C. Debevoise, now director of the Syrian Expedition of the Oriental Institute, is in the hands of the printer.

In addition to a preliminary study of the seal impressions given in the first Preliminary Report, R. H. McDowell has made a study that appeared as Excursus 3 to Rostovtzeff's Seleucid Babylonia, Yale Classical Studies, Vol. III (1932). A volume on the epigraphical material now being prepared by Mr. McDowell is rapidly nearing completion.

Thanks are due to the Government of Iraq for efficient local administration and to the Department of Antiquities for unfailing courtesy and helpful coöperation.

The publication of this Report under the auspices of the Institute of Archaeological Research of the University of Michigan has been made possible through funds granted to the University by the General Education Board.

Leroy Waterman
Director

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# I. ARCHITECTURAL FEATURES OF BLOCK B 

(Seasons 1930-31 and 1931-32)

By N. E. MANASSEH

ARISING under Greek dominance, Seleucia was laid out in rectangular blocks according to the usual Hellenistic practice. A brief description of the site and of Level I, as represented by the unearthing of one of its central blocks (Block B), has been given in the first Preliminary Report. ${ }^{1}$ Further excavation in Block B has brought to light a second and a third level and given assurance of still another.

The fourth (and earliest) level at this point has not yet been systematically cleared; but already important evidence indicates that it was purely Hellenistic and that it ceased to be occupied about the time of the Parthian invasion in 143/2 B.c. ${ }^{2}$

Level III belonged to the period when the city was autonomous under Parthian rule ( 142 b.c. -43 a.d.) and was destroyed, probably during the seven-year revolt, which ended disastrously for the Greeks of Seleucia and marked the close of Hellenistic domination in Mesopotamia.

Level II, which must have arisen during the revolt, as well as the various objects found therein, shows a remarkable change in the art and culture of the people who occupied it. Oriental influence became predominant in this level. By the time Level I had superseded it (110-120 A.D.) a new type of architecture had arisen which was as much Oriental as Hellenistic, and which was destined to become the prototype of Sasanian architecture (see first Preliminary Report, p. 19).

[^0]
## LEVEL III

## AREA

In Level III Block B was 458 feet long and 231 feet wide. It was later enlarged by encroachments on the surrounding streets until in Level I it became 460 feet long and 240 feet wide. It was so oriented that one of its diagonals pointed directly to the north, and the long sides of the block faced northwest and southeast.

## AGE

It has been mentioned that the estimated life of Level III was about 180 years. For a building constructed principally of unburnt bricks this may seem to be a long time; but the evidence of successive reconstructions makes the proposed period of its existence none too long, though its original plan could not have been fundamentally different from the one represented here (see Figure 1).

## FOUNDATIONS

The clearing of this level (see Fig. 1 and Pl. I, Fig. 1) has proved to be no easy task. Deep foundations of the two upper levels cutting through its walls have rendered it difficult to restore accurately quarters such as those around Room 301 and near Room 101. Moreover, in most cases the walls of Level II were built upon those of Level III, thus making it difficult to ascertain where the walls of the one ended and those of the other began. In such construction the usual procedure was to clear away the walls of Level III to a point about one foot above the ground floor and then to lay upon them the foundations of Level II. Fortunately, the masons do not seem to have been able to follow exactly the direction of the walls of Level III. Usually there was a slight variation in the alignment, which makes one wonder whether it was a sign of bad workmanship or was due to intent.

Another feature which often assisted in distinguishing the walls of Level III was the bed of potsherds which supported

Street 36

the overhanging part of the walls of Level II and which had a width of 6 to 18 inches and a depth of 6 to 12 inches. This partial and sometimes complete subfoundation of potsherds must have served to drain the ground water away from the wall and to prevent it from working its way up and disintegrating the unburnt bricks of the structure.

## DOORWAYS

The location of doors presented another difficulty. In using the walls of this level as foundations for their building, the masons of Level II were careful to block up all doorways; since this was usually done with the same kind of unburnt bricks of which the door jambs were made, it was possible to differentiate the original wall from the later filling only by following the bed joint between two courses around the room till a break was discovered. When the bonding was reinforced with reed matting the white ash of the decayed reeds furnished a favorable point for making these investigations.

Under narrow openings, such as doors, the foundations were always continuous and when it seemed impossible to locate doors in a room because its walls had been destroyed, the desired result could sometimes be accomplished by a study of the foundations. Plate II, Figure 1, furnishes a pertinent example. As a result of following a bed joint in the foundations of Room 22, a symmetrical rise was noted in the middle of the eastern wall, which undoubtedly was the result of unequal settling due to the different pressures exerted by the door jamb and the threshold. On further cleaning parts of a burnt-brick sill and remains of a brick jamb were found covered by a later wall.

## STREET WALLS

The toothed projections which appear on the outer walls of old Babylonian buildings and which are believed to have been introduced to provide rectangular chambers in irregular lots, were used here extensively. In a rectangular plan like
that of Seleucia their chief use must have been ornamental, namely, to cast a series of shadows which would relieve the monotony of an otherwise blank wall.

In Levels II and III these toothed projections did not rest upon a plinth or foundation of any kind, as did the offsets found in Level I, but sprang directly from the subfoundation, with a pronounced batter effected by laying each course a little behind the one below, and by smoothing up the edges with a thick coat of mud plaster mixed with straw. Examples from Levels II and III of walls having such projections appear in Plate II, Figure 2, which also shows the amount of the protrusion of Level II and its encroachment on the street (No. 10).

At a short distance from the northern and southern corners the wall on the street (No. 32) contained two potteryring drains, evidently to carry away the roof water. The rings, which were 2 feet 6 inches in diameter and about 2 feet high, were placed one above another with an outer layer of bricks and gypsum, 6 inches thick, around the joints to insure a water-tight connection.

## PASSAGES AND ENTRANCES

An extremely interesting feature of this level is the elaborate precautions manifest in the layout of passages connecting different parts of the block with one another and with the streets. In some cases these occur in pairs, running parallel to each other and always well guarded by doors. The one leading to Room 162 (see Fig. 1) is a typical example of this period. A person entering through it was obliged to pass four doors and a guard's room (R. 170) before he could reach the interior. The passage connecting a courtyard (No. 126) with the street (No. 32) was a still more complicated one. Here the visitor was compelled to make four turns and pass seven doors and a guard's room before the court could be reached.

Most of these passages were entered by small and unpretentious street doors which must have looked very much like
the shop doors (see below). In the middle of the eastern side, however, there were uncovered remains of what may have been the principal entrance to the block. Unfortunately, this area was very much disturbed by later walls, and only a brick sill and one half of an elliptical column, which was probably a part of a colonnaded entrance, were preserved.

SHOPS

A large part of the frontage of the block was made up of shops, about thirty in number. They were usually composed of single isolated chambers communicating directly with the street through small doors. Corner shops were exceptions to this rule. The southeastern corner was occupied by a twounit shop; the northwestern contained a row of three shops communicating with one another.

## THE MAIN BUILDING

At present it cannot be stated with certainty that Level III was occupied by a single building, as was the case with Levels I and II. Since the walls have not yet been cleared to the foundations, the plan produced here (Fig. 1) does not necessarily represent the original form of the structure. In general, it has been possible to investigate as yet only later occupations, and in certain places, as along the middle of the western side, only the foundations of the walls were found, with no sure indication of the location of doors to assist in studying the means of communication between different units of the block.

In most areas of this sort no attempt has been made to restore doors. This must await further excavation. In a few cases, however, it has seemed advisable to suggest certain entrances in a tentative manner. For example, the group of rooms around Room 14 had no visible access to the outside; therefore a door was restored between Rooms 8 and 39, since there was one at that point when the wall was re-used during the period of Level II. All restored doors have been indicated on the plan by a question mark (?).

A glance at the plan of Level III will show that the block may be readily divided into several similar units consisting of rooms grouped around a principal open court and a hall on the southern side, with a portico of two columns between antae. Most of these units were intercommunicating, but in the present state of the excavation there is no sure way of communication between the southern and the northern halves of the block; and naturally, if no such access is discovered in the course of future digging it will not be possible to assert that the whole block was one building.

On the other hand, the evidences that Level III was a single complex are numerous; (a) The fact that the two upper levels in the same block were each composed of one building and that the second was modeled largely after the third would undoubtedly suggest that this level was also a single unit; $(b)$ The supposition that such highly elaborate passages as the three connecting with Rooms 21, 128, and 162 were merely public alleys built simply to provide inner houses with access to the streets is very improbable; (c) If Room 21 was an alley, its direct communication with two courts (Nos. 18 and 45) would be very unusual, since to reach the principal court of the house of this and of earlier periods it was necessary to pass first through a system of antechambers and doors; ${ }^{3}(d)$ The drain of the bathroom (R. 65) led into a neighboring unit, an arrangement which would not be expected had the two units been separately owned; (e) The existence of several units having communicating doors between them makes it not unlikely that originally more such doors were in existence.

It is not easy to ascertain to what degree the absence of separate boundary walls may be taken to indicate that the block belonged to one owner. The plan of Merkes, referred to above, shows definitely that in Neo-Babylonian buildings it

[^1]was not customary to have common party walls, but that seems to have been the usual practice in Hellenistic sites in Asia Minor. ${ }^{*}$ So long as we do not know whether the Greeks in Seleucia followed older Babylonian customs or adopted what was familiar in Asia Minor we cannot take the absence of separate boundary walls to show that the block was one building.

Should this level prove to be a single complex, there would be no doubt that it was intentionally divided into several organic units or suites, and in describing the whole it is preferable to treat each of these separately. This arrangement was probably made to provide the children of the owner and their several families with semi-isolated apartments.

## THE NORTHWESTERN SUITE

The northwestern suite was the largest and in certain respects the best planned. It had an entrance on the northern and eastern sides, and two or possibly three on the west, and was detached from the rest of the block by two passages (Nos. 21 and 162). It contained four open courts (Nos. 18, 178, 169, and 197) and a hall with an impluvium (R. 201). The other rooms were grouped around these for the sake of light and ventilation.

The court (No. 18) and the colonnaded hall on its southern side constituted the most significant part of this suite (see Pl. III, Figs. 1-2). Here is a typical example of that purely Hellenistic plan characteristic of this level. Plate III, Figure 1 , shows the remains of the later mastaba (a raised platform) and other additions which accumulated around the columns as the floor level continued to rise. Plate III, Figure 2, presents the original structure after the removal of later additions. The early mastaba must have been torn down and its bricks re-used in the later one; similarly the right side column was no doubt taken away by the inhabitants of Level II to make room for the pottery drain, visible in the picture.

[^2]The façade of Room 12 consisted of two burnt-brick columns standing between antae, also made of bricks and similarly treated (see Fig. 2). The brickwork was all laid in gypsum plaster except the two upper courses of the pedestals, which were set in bitumen to prevent moisture from rising in the structure.

Behind the colonnade was the prodomos (vestibule) leading into a megaron or principal hall, an arrangement already seen to be Greek in character.

The other courts also had large rooms on the southern side, though they did not have colon-


Fig. 2. Detail of column in Court 18, Level III naded façades. They were more like the principal chambers in Neo-Babylonian buildings.

In conclusion, mention may be made of the receptacle located in the floor of Room 188. It was 3 feet long and 2 feet wide and was made of burnt bricks laid in bitumen. Evidently it was intended to be waterproof; its proximity to the main entrance of this compound (R.217) suggests provision for the Oriental custom of ablution prior to entering a dwelling. ${ }^{5}$

## THE NORTHEASTERN SUITE

The northeastern section is situated to the east of the one just described. It contained two colonnaded courts (Nos. 45 and 27), the first of which (see Pl. IV, Fig. 1) had columns on both sides and belonged originally to Level IV. Though

[^3]they seem to have been used in Level III also, very probably the general plan of this court was later modified. It had certain peculiarities which, should they be taken to represent the architecture of Level IV, would lead us to expect a somewhat different type of construction in that level. Instead of the secondary room usually present in front of the colonnaded hall in Level III, we have here another similar hall; and the burnt-brick antae which were an important feature of Level III were absent in this court, as was the mastaba which usually surrounded the courts and which in Room 54 was replaced by a stepped stylobate leading up to it.

The megaron behind the prodomos (No. 62) was not symmetrically arranged with respect to the outer court, as in the other groups. A small narrow room (R. 264), whose purpose cannot be definitely ascertained, was cut out from it. An exactly similar room was located to the east of another megaron (R. 104). Possibly they contained staircases leading to the upper story. In Level II, Room 248 (see Fig. S, p. 18), which was built above Room 264 of Level III, was evidently occupied by a staircase. The area near the door was filled with unburnt bricks, as would be expected in a support for stairs; farther in, where filling was unnecessary, the space was utilized and made into a small room connected with Room 83.

The second court (No. 27) and its hall were found to be in a rather bad state of preservation (see Pl. IV, Fig. 2). They were nearly destroyed by later occupations, especially the hall, which was dug up and filled with rubbish, that was then burned. The columns and antae have totally disappeared, and their brick foundations have suffered greatly from conflagration.

The group of rooms around Room 14, to which access through the hall (No. 39) has been suggested, seems to have been of secondary importance. Some of its walls were missing and no restoration can be attempted until the area is further excavated.

The corner room of this suite (R. 68) is of special interest because quite probably it belonged to a bathing apartment (see Pl. V, Fig. 1). It was paved with bricks and coated with bitumen and contained a small open conduit that crossed it diagonally from under the sill to the northwestern corner, where it connected with a drain built into the street. The


Fig. 3. Section through door in Room 51, Level III, looking north (restored)
adjoining room was too much obliterated to afford any clue to its original purpose, but evidently the conduit carried water away from it and for that reason the room must have been paved and used in connection with the bathing arrangement.

This northeastern complex was reached from the street through Room 51 as well as by a corridor (No. 21). The doorway of Room 51 was well preserved and might be taken to represent the more elaborate entrances of this period (see Pl. V, Fig. 2, and Pl. VI, Fig. 1). It was approached from the street by a step 6 feet wide, having a tread of 2 feet 4 inches and a rise of one foot above the street level. Three steps span-
ning the thickness of the wall led down into the room. All the steps were made of burnt bricks laid in bitumen and plastered with a thick coat of the same material. The bricks seen to the left of the entrance in Plate VI, Figure 1, were the foundations of the door socket, which, probably being of stone, was no doubt carried away to be re-used.

As the upper courses of the steps were liable to be worn unevenly, they were set back about 6 inches behind the faces of the lower ones, and the space thus left must have once contained a wooden beam that extended the width of the steps. Figure 3 shows these beams in section at the edge of the tread (see also Pl. VI, Fig. 1). This arrangement may still be seen in modern staircases in Iraq.

Room 51 led to a guardroom (R. 67) and to a small room (R. 73) with a brick-lined impluvium, which must have served as a light well for the corridor (No. 46).

## THE SMALL EASTERN SUITE

The court of the small eastern suite (No. 144), which was a sort of common center for the northern half of the block, led into a small group of rooms isolated from the rest and communicating with the street (No. 32) through Room 87. No doors were found in Rooms 88-91. Presumably their floors were higher than those of the other rooms and were reached by a ramp or series of steps in a narrow corridor (No. 64), which could have served also to light the adjoining rooms through windows built high in the walls.

Two small mud impluvia containing jar drains were found in Rooms 96 and 81. Apparently no burnt bricks were used in their construction; the waterproofing of bitumen or gypsum which once covered them has disappeared.

In the doorway between Rooms 81 and 60 were two brick door sockets. This was the only case of a double-leaf door encountered in Level III. ${ }^{6}$

[^4]
## THE EASTERN MIDDLE SUITE

The principal court of the eastern middle suite (No. 102) with its prodomos and megaron constitutes the best preserved quarter of this level. Certain parts of the portico of the prodomos were still standing 10 feet above the original floor. This is primarily due to the fact that the floors of Level II at this point were built higher than the rest, and consequently less damage was done to the portico beneath.

Plate VI, Figure 2, gives an idea of the original appearance of this area. The well seen in the foreground belonged to Level I and had nothing to do with this court. A large part of the mastaba may still be seen. Previously it ran on all sides of the court and served as an approach to the various rooms. Room 107 was at a little higher level and contained a well-built impluvium and a small inner room. The portico led into the prodomos (R. 106), which in turn led to the megaron ( R . 104), both arranged in the usual manner and connected with several other rooms.

The rooms on the northern side of the court (No. 102) must have undergone a number of alterations, since remains of three sets of walls occur there. Probably, according to the original plan, the walls of Room 83 were in line with those of the court, and the western wall contained a door leading to a court (No. 144). The second alteration was to reduce considerably the size of the room and to open a door in the eastern wall. The last change enlarged it a little by building a new set of side walls between the previous two.

This suite was reached from the street (No. 32) by two parallel corridors starting from the entrance (No. 101). The original shape of one of them is not yet certain, and our ideas of it may have to be modified in the light of future excavation. It consisted of Nos. 95 and 108 and communicated with the prodomos through the antechamber (R. 110), in which part of a gypsum wall paneling was found in situ. The paneling, which is shown in Plate VII, Figure 1, may be of assistance
in reconstructing the interior decoration used in the halls. The second corridor (No. 74) led to a court and to a number of secondary rooms, the most important among them being the bathroom. The larger part of the room was paved


Fig. 4. Section through portico of Room 106, Level III, looking east. Different "occupations" shown
and plastered with bitumen. The southeastern corner had remains of a receptacle for water, and the opposite corner of the pavement contained a drain leading into a brick conduit.

Plate VII, Figure 2, shows the later reconstructions around the columns of the court (No. 102). As the floor level rose, new sills between them were necessary, and when these were
later buried to a depth of about five feet, two square shells were built around the columns, forming massive pedestals, probably to support the quickly disintegrating bases (see Fig. 4). Five different occupations could be traced at this point, and the columns had remains of four successive coats of gypsum plaster.

## THE WESTERN MIDDLE SUITE

The part of the block in the western middle suite was destroyed somewhat more than the rest. A large portion of it happened to be under the principal iwans (rooms with one side opening upon a courtyard) of Levels I and II, and their unusually deep foundations did much to obliterate the plan of Level III. According to the suggested restoration, this complex was connected with the southern suite and had an entrance in Room 145 and another in Room 207. The rooms were grouped around two courts (Nos. 118 and 153). Possibly Room 302 was another court.

The colonnades, which are an important feature of all principal courts of Level III, are totally absent at this point. Instead, the court (No. 118) had two small iwans on the southern side.

Room 111 is of peculiar interest. The curved niche in the western wall appears also in rooms of Levels I and II above it; the fact that it is out of alignment with the neighboring rooms, so that to offset this difference the builders had to modify the shape of two rooms on one side and build a wall of unequal thickness on the other, would show that this room had a special significance which was continuous throughout the four successive levels.

In the wall opposite the niche and concealed behind the plaster there was found a small box containing three compartments. The largest of these was 7 inches wide, $31 / 2$ inches high, and 6 inches deep, and above this were two smaller ones, each measuring about 3 inches by $1 \frac{1}{2}$ inches (see Pl. VIII, Fig. 1). Its cover was made of a movable piece of plaster
similar to the gypsum plaster of the wall. Unfortunately, it had been disturbed in antiquity and was filled with earth.

## THE SOUTHWESTERN SUITE

The southwestern corner of the block was connected with the suite just described, through Room 123, and it also communicated directly with two streets (Nos. 32 and 36). Its principal feature was the court (No. 126) with a hall. Instead of the usual prodomos and megaron at the southern end of the court, it had only one hall, though possibly this was divided into two, since, as it now stands, it is rather too large to have been covered by a roof carried on wooden rafters.

The portico was originally very much like one in another court (No. 18), except that it was not built of as good bricks. They very soon disintegrated and it was necessary to build a reinforcing shell of bricks ( 1 foot square) around the columns and antae and along both ends of the entrances (see Pl. VIII, Fig. 2). The space thus formed between the columns was filled with a mixture of gypsum, potsherds, and bricks to provide a firm threshold for the raised entrance. At this stage there was no mastaba around the court, and the hall was approached by a series of steps, a part of which may still be seen in the left background of Plate VIII, Figure 2.

With the later reinforcement the columns were 6 feet 4 inches in diameter and were covered with fluting worked in plaster and executed in an unusual manner, being angular and resembling in section a many-pointed star (see Pl. IX, Fig. 1). From the manner in which parts of this plaster fluting fell around the columns it can be estimated that their height was at least twenty feet.

In the northwestern corner of the court (No. 126) there was a square brick-lined well abutting on a rectangular reservoir made of burnt bricks laid in bitumen and having three steps leading down to the bottom.

## THE SOUTHEASTERN SUITE

Though entrances to the southeastern quarter were found on the streets (Nos. 32 and 227), another opening has been proposed between the court (No. 138) and Room 124, since the same court in Level II had a door in that part of the wall, which has not yet been thoroughly cleaned, and since elaborate and well-guarded passages such as Room 124 usually led into the principal courts.

In this suite also the rooms were grouped around the courts (Nos. 138 and 38), the first one of which had the customary portico on the southern side leading into a prodomos and a megaron. Plate IX, Figure 2 shows remains of the original structure of the court; Plate X, Figure 1, gives the later additions which accompanied the rise of the floor level. Parts of three successive thresholds and mastabas may be seen in it.

The wall indicated in outline on the plan separating Room 135 from the court is a later addition, and since the section preserved was not higher than the last floor level of the court, no traces of a door were found in it.

It is difficult to ascertain with certainty how various rooms were lighted. For example, it is not likely that the megaron (R. 50 ) depended for its illumination on the light obtainable through the prodomos, or that such apartments as Rooms 48 and 258 were lighted through the megaron. Possibly there were more open courts that are no longer discernible. In this particular locality the roofs of the rooms might have been higher than those of the shops and might have contained windows. This supposition is very plausible in the case of the megara, whose greater width would call for higher ceilings.

## LEVEL II

Level II (Fig. 5) was built during the seven-year revolt (37-43 A.D.), and its occupation came to an end about 110120 a.d., perhaps during Trajan's invasion of Parthia. As already mentioned, it followed in a number of places the older

Street 36

plan of Level III, but it betrayed an unmistakable Oriental influence which marked it as the first of the two purely Parthian levels built in Seleucia.

## STREET WALLS

The outer walls of this level encroached on the streets on all sides, from a few inches to two feet. The northeastern corner wall contained toothed projections copied from those of the level below. Room 245 on the western side, which at first sight seems to have been an insignificant shop, was the center of triple recesses in the wall. This was the only one of its kind and must have given the entrance an appearance superior to that of the other shops.

## PASSAGES AND ENTRANCES

There were five entrances leading into the interior of the block. With the exception of the principal entrance in Room 150 (described below), they were all small and could not have differed greatly from the other doors in the building.

In this level passages were greatly reduced in number, and the only two of importance (Nos. 105 and 128) were copied from Level III. Two L-shaped corridors were built in this level; the first (No. 212) gave access to the sacred area of the building and the second (R. 165) abutted on the group of rooms in which no doors were found and which must have been built at a higher level than the remainder of the block.

## THE SHOPS

The shops in this level repeat the plan of those of Level III, but their number is reduced by three fourths. This might be due to the fact that after the revolt the business activities of the city were much curtailed, or that the block passed from the possession of a wealthy merchant family into the hands of one of the new ruling class.

No entrances were found to the rooms built over the rest of the shops of Level III. They either were used as storerooms
or had raised floors, and in either case their doors would have been at a higher point than the present tops of the walls.

## A POSSIBLE SHRINE

The corner room (R. 45) deserves special mention not only because its door was the second one with two door sockets so far found in Seleucia, but also because it contained certain features which strongly suggest that it may have been a shrine (see Pl. X, Fig. 2.)

A semioval platform 2 feet 8 inches long, 2 feet 4 inches wide, and 2 feet 7 inches high, faced with bricks coated with stucco, was located in the middle of the room. In front of it and partly attached to it was a column altar, 2 feet 4 inches high, of hard limestone covered with plaster molding and resting on a brick pedestal. Between it and the entrance there were remains of another brick column.

The top of the stone column had a shallow depression similar to those found on stone altars, and the whole ensemble suggests a small sanctuary.

## THE MAIN BUILDING

There can be very little doubt that Level II was a single building. Though it may be divided into various units that are somewhat isolated, the desire of its architect to produce a homogeneous plan is quite apparent. The construction of an elaborate entrance (R. 150) surpassing all other entrances, the presence of a huge iwan and a court confronting a fire altar (?), and the connection of this large unit, which was apparently of religious significance, with other units tend to prove that a building worthy of the name of a palace occupied Level II (see Fig. 5).

A comparison of the plans of Levels II and III shows the complete absence in the former of the colonnaded entrances predominant in the latter. Though most of the halls in Level II were built above the earlier prodomoi, their builders seem to have abandoned the Greek megaron type of architecture
and inaugurated the use of the Oriental iwan, which became an important feature in later Sasanian and Arabian buildings. These iwans appear in various places and form the center of the suites in which they are located.

## THE NORTHWESTERN SUITE

The entrance to the northwestern quarter (R. 150) was also the main entrance of the palace. It was once highly decorated, and the pieces of plaster ornaments found in and around it give a fair idea of how it must have looked. It was covered by a flat ceiling which had in the middle a gypsum medallion, about two feet in diameter, made of a wheel pattern radiating from a central human head and bounded by a double scroll design (see Pl. XI, Fig 1).

The right jamb of the gate was missing, but its position was marked in the brickwork of the pavement. Exactly under it and a few inches below the brick sill was the skeleton of a foundation sacrifice, possibly a boar with which some beads and bronze objects had been buried.

A piece of decorative plaster in the débris of the gateway shows that the gate was arched. Figures $6 A$ and $B$ represent respectively the designs of the soffit and the face of the arch.

The principal iwan (R. 108) stood above the megaron (No. 42) and above a part of the prodomos (No. 12) of Level III. A second iwan (R. 54) faced the entrance, and a third (R. 64) stood in the center of the corner group of rooms. The outer walls of the seven rooms around this last iwan, as well as the walls of Room 52 and the south wall of Room 53, were faced with burnt bricks containing a number of grooves about 6 inches wide (see Pl. XI, Fig. 2). Originally these walls bounded a large open court, which was later divided by walls of unburnt brick. The presence of grooves in the walls of such a court is difficult to explain. Similar simple grooves were found at Warka. ${ }^{7}$ Dr. Jordan thinks that they were mural decorations and had doubly rebated edges worked in

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{ }^{7} \text { Julius Jordan, Uruk-Warka, p. 34, and Plate 71a. }
$$



Fig. 6 A. Decoration of soffit, main entrance, Room 150, Level II


Fig. 6 B. Face of arch, main entrance, Room 150, Level II
mud plaster like the more elaborate grooves which appear in conjunction with decorative niches and engaged columns. ${ }^{8}$

## THE NORTHEASTERN SUITE

The important paved courts were found in the northeastern complex (Rs. 65 and 68). Both courts were reached through a corridor from the street (No. 105), and each was bordered on the south by an iwan and had a broad, paved mastaba curbed with bricks laid on edge. The iwan of one court (No. 65) gave access to various spacious rooms lying on both sides of it, but the other iwan communicated with only one room, which led to a small niche probably built under the staircase suggested in Room 248. ${ }^{\circ}$

Undoubtedly this corner area was an important domestic quarter. The row of small rooms on the northern side in which brick fireplaces were found were kitchenettes. The larger rooms contained a great amount of débris that resulted from a severe conflagration which partly baked the crude bricks of the walls and which could not have been caused by the burning of the usual inflammable furniture. Evidently these rooms were storerooms, and when the fire broke out they were full of grain and other provisions. ${ }^{10}$

## THE EASTERN MIDDLE SUITE

A glance at Figure 5 will show the complete absence of doors in the eastern middle part of the palace. The only explanation that can be given of the fact that about forty-five rooms grouped together have no means of communication with one another and with the rest of the block is that they were built with a higher floor, and consequently when the

[^5]ruins were leveled down the walls in this section were destroyed to a point below the floors, thus obliterating all traces of doors.

Certain indications of floor levels in this suite show that its floors were about three feet higher than those of the surrounding areas, to which it must have been connected by steps. Two places suitable for such steps were found. The first, a corridor (No. 165) , probably connected the southern half of the suite with Room 128; the other half might have had an access to a court (No. 226) through Room 14. This room had an elaborate entrance of burnt bricks separated by a partition wall from a similar one leading to the opposite complex. We might very well suppose that the door of Room 14 was also an important entrance and that the room was a communicating corridor ending in Room 100 and gave access to the various chambers on both sides.

## THE WESTERN MIDDLE SUITE

The section extending from the corridor (No. 212) to Room 202 was by far the most important quarter of this level. Certain walls in it were seriously damaged by the foundations of later buildings, but enough remained to indicate its preeminence over the rest of the block. It was reached from the street directly through a corridor (No. 212) and indirectly through a court (No. 226). It contained two outer courts (Nos. 23 and 207) leading into the inner principal courtyard (No. 205), which was paved and had a huge south iwan lined with brick mastabas. Figure 5 shows a late phase of this complex when the court was paved and had mastabas 1 foot 2 inches high, on three sides, and a fire altar (?) in a recess in the court in front of the iwan. The top of the south mastaba was flush with the floor of the iwan and formed a step leading up to it; the other two were used as seats (see Pl. XII, Fig. 1). Fragments of pavements in the northern end of the court have suggested the accompanying restoration of this area (see Fig. 7 ), according to which the northern ends of the side mastabas

Fig. 7. Restoration of Rooms 203, 205, and 208, Level II
were enlarged into wide platforms divided by a lower aisle leading up to Room 208, where a large and well-built fireplace was located.

Though very little is known of the religious architecture of the Parthians, the presence of the fireplace in a recess in the middle of the north wall of the court facing the iwan of the palace, with seats and platforms symmetrically arranged on both sides of it, strongly suggests that here was a fire altar and that the iwan and the court with seats and platforms served as a chapel where the residents of the palace practiced their rites.

This altar, which was built of burnt bricks and coated on the inside with mud plaster, was pear-shaped and stood about 2 feet high. Its outer dimensions were 6 feet 2 inches by 4 feet 6 inches. The inner receptacle, which was found full of ashes, was 3 feet 3 inches long, 2 feet 6 inches wide, and 1 foot 8 inches deep (see Pl. XII, Fig 2).

At a still later date the floor of the court rose until it was as high as the top of the mastabas. Without disturbing the older pavement a new one was built at that level. The well shown in the figure belonged to this late occupation.

The original shape of the sacred area was different. The huge foundation of an altar (?) was unearthed in the open court in front of Room 208 and under the aisle which was constructed later (see Pl. XIII, Fig. 1). The corridor (No. 212) was then divided into three rooms and another corridor originally displaced Rooms 204, 208, and 211. The side walls of the court (No. 205) converged toward the iwan as if the architect intended to make the altar appear nearer than it was, to a man standing at the back of Room 203.

In the present restoration (Fig. 7) a vault has been suggested above the crude brick walls of the iwan. This seems to be the logical development after the abolishment of the colonnaded porticoes prevalent in Level III. A series of tests made on samples of unburnt bricks from this building have shown
a compressive strength able to carry safely the maximum stress produced by a vault spanning the widest iwan found here. ${ }^{11}$

## THE SOUTHWESTERN SUITE

The main entrance to the southwestern compound was through the principal passage (No. 128), but the door in Room 118 furnished another access to the street (No. 36). This suite had two large parallel courts, of which the eastern (R. 94) contained a wide mastaba and a well and had two iwans opening into it.

Instead of the usual southern iwan, the second court (No. 97) had only a fair-sized room, whose south wall was faced with bricks ornamented with grooves similar to those in the northern corner of the block.

There were no traces of doors in the four small rooms east of the court (No. 94). Either they were storerooms or they were constructed to furnish a firmer floor for an upper room as large as all of them. The presence of three brick steps in Room 137 would show that they were reached from above.

## THE SOUTHEASTERN SUITE

The plan of the southeastern corner of the block followed to a large extent that of Level III. As in all other courts of Level II, the older colonnade was abandoned, and a mastaba was built above the remaining tops of the columns.

Room 36 showed two distinct floor levels, each with its own doorsills and with gypsum plaster dadoes forming a baseboard along the walls at floor level. The later dado of the western wall contained various symbolic signs and swastika marks (see Pl. XIII, Fig. 2).

[^6]Rooms 146 and 8 supplied the lavatory and bathroom of this quarter. In the pavement of the first a hole eight inches in diameter was lined with a jar. The other room had two brick basins separated by a burnt-brick wall and connected by a small conduit seven inches wide. A jar drain to carry away the waste water was discovered under the partition wall.

## CONCLUSION

In studying the history of Oriental architecture during the few centuries that followed Alexander's conquests (and this period up to the end of the last century was supposed to be a complete blank ${ }^{12}$ ), one is obliged to turn to such places as Seleucia on the Tigris, since it remained for generations the farthest and most important outpost of Greek civilization in the middle East. The city is of great interest not only on account of its vast remains, but also because it furnishes the missing link between Hellenistic and Sasanian architecture and shows the results of the blending of Greek with Oriental elements. The fusion took place through years of experimentation and gave rise to the Iwan type of construction, famous in later periods. It was under Parthian rule that most of this blending was accomplished. Recently a great revival of interest in this period has taken place, partly because of the scanty information hitherto available.

Long before the establishment of the Seleucid dynasty Oriental and Greek arts influenced each other. Oriental ideas penetrated Greece through Asia Minor, and Oriental invaders carried home Greek artistic conceptions; but it was only after the founding of Seleucia, where for many years Greek and Oriental builders worked side by side, that the real fusion of the two arts was possible; hence to understand fully the architectural remains of Seleucia it is necessary to compare older Mesopotamian and Greek buildings.

[^7]There is no doubt that the most significant feature of Level III is the megaron, with its porticoed prodomos. This arrangement is essentially Greek and can be traced back to the Mycenaean age, of which the best example is the palace at Tiryns. ${ }^{13}$ In the classical period it was adapted to the plan of the temples, and later became very common in Hellenistic houses, as may be seen from the results of the excavations at Priene. ${ }^{14}$

In Greece and Asia Minor these megara occupied invariably the north side of the court and faced the south to admit as much sunshine as possible, whereas the principal rooms in Babylonian buildings were placed at the southern end of the courts and their doors opened toward the north away from the hot rays of the sun. ${ }^{15}$

Babylonian houses usually had more than one court, each with its principal south room. Greek dwellings of the period before the colonization of the Orient had only one court. ${ }^{16}$

The Greek peristyled court had no parallel in the architecture of Babylonia, where shelter from the slight rainfall was not necessary for those crossing the court and where the excessive heat of summer allowed no lounging in such spaces. However, it was introduced into Babylonia at the beginning of the Seleucid period, ${ }^{17}$ but was short-lived and soon disappeared. The best example of this innovation is to be found in the palace at Nippur, built about 250 B.c. ${ }^{18}$ or nearly a century before the invasion of Seleucia by the Parthians. This palace must have been contemporary with our Level IV.

The effect of the Hellenization of the Orient upon the architecture of Mesopotamia was very similar to that noted by

[^8]Professor Howard Butler in the Haurân. An imported style preceded a native one and then Oriental elements influenced it until they dominated it completely. ${ }^{19}$ Our Level IV and the palace at Nippur would be the result of the first contact of the imported style with the indigenous one. The peristyled court and the disposition of the prodomos and the megaron, which are the main features of the Nippur palace, are purely Greek, whereas its second parallel court and entrance are Babylonian. ${ }^{20}$

The second step is represented in Level III at Seleucia. The peristyle around the court was found unnecessary and was replaced by a simple mastaba. The prodomos with its portico made of two columns standing between antae was retained, but was made to face north in contrast with its Greek prototype, which invariably opened toward the south. Undoubtedly this was done for climatic reasons, which obliged the Seleucian architects to erect their halls in the place previously occupied by the Babylonian principal rooms (see above). In certain quarters of this level the megara were not built behind the prodomoi; they became subordinate to the prodomoi and were put on the sides.

No direct indication was found of the roofing used in Level III. The use of the megaron type of plan and the presence of a number of impluvia tend to show that the roofs were flat and could not have been very much different from modern flat roofs common in Mesopotamia. These are built as follows: Slim, unhewn trunks of trees, transported down the river from the mountainous regions, are put across the walls of the room at intervals of one or two feet; reed mats are then placed over them and a stratum of loose dirt about six inches deep is spread on top; the surface is finally coated with mud and straw plaster. The stratum of loose dirt is an excellent insulator of heat and is indispensable in the summer.

[^9]The final result of the amalgamation of Greek and Oriental elements appears in Level II, which was purely Parthian and was built during the revolt. The most fleeting comparison between its plan and that of the earlier level shows to what extent two buildings constructed one above the other may be similar and still fundamentally different. In many places Level II followed the older arrangement with remarkable faithfulness. Five of the six megaron groups of Level III were re-used in Level II, though with a very significant change. These were no longer Hellenistic halls, but became perfect iwans, which were finally identified with later Oriental architecture. The tops of the columns and antae were in some cases covered with new mastabas leading into the open iwans, and in Room 12 of Level III one of the columns was torn down in preparing a drain for the enlarged court of Level II. With the building of this level the column as a structural element disappears completely from Parthian architecture. It is henceforth used only as a mural decoration, often worked in gypsum plaster and engaged in walls to divide them into ornamented panels.

The importance of this transition from the megaron to the iwan, which we are now able to assign to the middle of the first century a.d., is considerable, since it may very well modify the general belief concerning the origin of the iwan. Miss Gertrude Bell traced the origin of the iwan to the southern Hittite khilani architecture, ${ }^{21}$ which in the light of excavations at Seleucia would seem rather far-fetched. The consideration that from the beginning of Seleucid rule to approximately 50 A.d. Mesopotamian architecture was of the megaron type and then suddenly vaulted iwans were built above their walls, many years before such structures are known elsewhere, points to these iwans as the direct modification of the older Greek type.

[^10]PLATES I-XIII


Fig. 1. General view of Block B, Level III, looking south


Fig. 2. Middle part of block, looking east


Fig. 1. East wall of Room 22, Level III, showing uneven settling of foundations under door


Fig. 2. Toothed projections in street walls of Levels II and III; Street 10


Fig. 1. Later reconstructions in Court 18, Level III, looking south


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Fig. 1. Court 45, Level III, looking south


Fig. 2. Foundations of portico in Court 27, Level III, looking north


Fig. 1. Northeast corner of Block B, Level III, looking south


Fig. 2. Brick entrance to Room 51, Level III, from street


Fig. 1. Brick entrance to Room 51, Level III, from inside


Fig. 2. Remains of original structure in Court 102, Level III, looking south


Fig. 1. Plaster mural decoration in west wall of Room 110, Level III


Fig. 2. Later reconstructions in Room 102, Level III, looking south


Fig. 1. Cash box in east wall of Room 111, Level III


Fig. 2. Portico in Court 126, Level III, looking south


Fig. 1. Fragment of architectural plaster with fluting


Fig. 2. Remains of original portico in Room 138, Level III, looking south

PLATE X


Fig. 1. Later additions to Court 138, Level III


Fig. 2. Altar (?) in Room 45, Level II, looking southeast


Fig. 1. Plaster medallion from ceiling of Room 150, Level II


Fig. 2. Brick wall facing, with grooves. Northwestern corner of block, looking northeast. Room 64,
Level II


Fig. 1. Court 205, Level II, looking north


Fig. 2. Fire altar in Room 208, Level III, looking south


Fig. 1. Foundation structure under northern end of Court 205, Level II, looking north


Fic. 2. Marks on plaster of wall, Room 36, Level II

# II. THE TOMBS FOUND AT SELEUCIA 

(Seasons 1929-30 and 1931-32)
By S. YEIVIN

## Introduction

## BURIAL GROUNDS

AMONG the various ancient peoples the Babylonians stand almost alone ${ }^{1}$ in their custom of disposing of the dead in the abodes of the living. This practice is very old and is known in early Sumerian strata. The earliest civilization, however, shows a different usage at Ur, where cemeteries occur entirely apart from the houses for the living. This suggests that the custom of burying in houses may have been a local development in Babylonia, and later than the earliest metal age in the country.

The presence of cemeteries, at Ur of all places, ${ }^{2}$ seems to give a hint concerning the rise of the later usage. The practice appears to be due in the first place to economic reasons. The Nile Valley is quite narrow for the major part of its length, and is provided on both sides with easily accessible slopes, which, being above flood level, cannot be cultivated, and hence furnish ample space for the disposal of the dead. The valley of the Euphrates and the Tigris, on the other hand, is a broad expanse of low-lying land all easily flooded or irrigated. High ground above irrigation level is to be found only at some distance to the west of the Euphrates in the Syrian

[^11]desert and far to the east of the Tigris in the foothills of the Zagros Range. No high and, consequently, untillable land exists between the two rivers in the south country. The population was dense and land too precious to permit plots to be set apart for the burial of the dead-areas which would increase in size with the passage of time and so rob the inhabitants of more and more arable land. The only ground within easy reach of any settlement which could not be used for cultivation was within the settlement itself. At the same time it was the only elevated spot accessible where the dead would be above flood level. Hence arose the custom of burying the dead in houses, under floors and within walls. In the course of time, as the custom gained religious significance, its economic origin was lost sight of. The practice gave Babylonian religion, and especially magic, several of its aspects, while religion in its turn supplied the custom with its raison d'être.

If we estimate the population of Block B during the period of Level II to have been about one hundred persons-a very conservative estimate in view of housing conditions in the ancient Near East-we shall arrive at unlikely death rates. One must conclude, therefore, that other customary places of burial were utilized. Some may have been buried within sacred inclosures, as is still the case in the country, where every pious Shi'a hopes to be buried near some historic shrine, such as Kerbela or Nejif. Some groups must have had separate cemeteries. This was probably true of the Jews, a large settlement of whom is known to have existed in Seleucia. ${ }^{3}$ Allowance may also need to be made for differing racial customs. Greeks may have practiced cremation, though no traces of such practice have been found; the Parthians, if they were Zoroastrians, may have disposed of their dead in the manner still in vogue among the modern Parsees (i.e. in the towers of silence).

[^12]
## TYPES OF BURIALS

Though a great many bodies were disposed of in walls or under floors, without further protection of any sort, the great majority were covered by some sort of superstructure or placed in jars or coffins. In view of the practice of interment inside the house, one might have thought that such precautions were the minimum required for sanitary purposes; however, it is doubtful whether regard for hygiene played any part in the erection of burial structures. ${ }^{4}$ These probably arose from a wish to embellish one's last resting place, or better to protect the dead against marauders. Their erection or omission probably depended largely upon the social and economic position of the deceased. To the same cause is doubtless to be attributed the variety of the existing structures.

At the same time there are some types of tombs and coffins that appear only in certain levels. Thus, family vaults, whether large or small, do not occur after the period of Level II. None of these has as yet been found in Level I. ${ }^{5}$ This lack seems to reflect an economic decline, rather than a change in burial custom. People could no longer afford large funerary structures. The absence of coffins at this time is probably due to the same cause. Of 49 burials in drab pottery coffins, 2 belong to Level IV, 28 to Level III, 16 to Level II, ${ }^{6}$ and only

[^13]1 to Level I. The last one is a unique type of slipper coffin found in trial trench 30, near the surface of the ground, and may well belong to a very much later date, as seems indicated by the Syriac incantation bowls found near this coffin.

In Block B itself there are other indications of economic decline during the period of Level I. For example, concrete paving of streets, noticeable in Level II and probably also in Level III, does not occur in Level I. Only outside Block A were there possible traces of street paving, and this is of a very inferior kind. The traces so far observed of a general canalization system all belong to Level II or to earlier periods. None were found in Level I. The pavements of Level II or of earlier levels were made of square burnt bricks carefully laid. In Level I they were made of fragmentary bricks laid on edge in very irregular fashion, especially noticeable in the courtyard in Level I (No. 77/97). In the same court no large excavation was made for the installation of a deep central drain, as in the case of the courtyard in Level II (No. 205) lying immediately below; instead, an open channel was constructed through the middle of the court, in which the water undoubtedly was left to dry off. The brick dadoes (base boards) were made less carefully and were of rarer occurrence than in Level II and earlier. Also a much smaller part of the block was rebuilt, though rooms were more ample and probably loftier (see figures of Levels I and II).

Another feature of the burials was the complete absence of glazed coffins after the end of Level III. This apparently cannot be explained on economic grounds, but is probably due to the cultural change observed at the end of this period in almost all branches of life in Seleucia. Of the 10 burials in glazed coffins, 6 belong to Level III and 4 to Level IV. The same remark applies to the slipper coffin, with the one exception mentioned above, which is of a different type from those found in Level III. The remaining 5 examples consist of 4 unglazed coffins of one and the same type and 1 glazed specimen, all belonging to Level III.

Burials were made in walls of rooms, at various points under floors, and even in the streets. ${ }^{7}$ There does not seem to have been any single wall of a room in which burials were placed in preference to others. Of the 23 burials in walls 6 were in a southern one, 3 in an eastern, 9 in a western, and 5 in a northern. Only 8 were placed in corners; the rest were along the middle portion of walls, of which 4 were in walls facing on streets. Of these, 21 were placed below floor level and only 2 (Nos. 26 and 118) immediately above it. The former practice was no doubt adopted for religious (and sanitary ?) reasons, to keep the dead as far away as possible from the living. In the two exceptional cases either the rooms were not frequently used or else the dead were particularly dear to the family, who wished to keep them as near as possible.

Burials under floors were sometimes in the center of the room, especially if the room was small. More frequently they were put along the wall adjoining a corner. Burials near the middle section of walls (below floor level) or away from walls, but not in the center of the room, were very rare. Here, again, no preference is discernible. One may conclude, therefore, that the people of Seleucia had no preferred orientation in their funerary arrangements. Vaults, too, opened toward any cardinal point. No vault opening to the south has so far been uncovered, but this is probably due to chance and not to any taboo on southern openings. ${ }^{8}$ Nor does the orientation of a body inside its superstructure show any fixed rule. Moreover, in graves which contained more than one burial, the bodies were frequently placed in opposite directions. The same lack of preference appears also in the orientation of the face, though about half of the bodies were

[^14]either so placed that the face was directly upward or the head was propped up so that the chin rested on the chest. ${ }^{\circ}$

As a rule, the bodies were laid at full length on their backs. Contracted burials of grown people were a rare exception. Small children, however, and more especially infants, were almost always buried in a contracted position and in jars, usually in ordinary cooking pots (see pottery types No. 347). The position of the extremities in full-length burials varied, but in this respect, too, there were certain positions that occurred at random without any special reference to periods.

## POPULATION AND MORTALITY

Had the people of Seleucia adhered strictly to the Babylonian custom and disposed of all their dead inside their houses, the number of burials within any definite level might have given some clue to the density of population at a given period, rates of mortality, and the like. The moment any statistics are attempted on the basis of the existing materials, it becomes quite obvious that the present data are inadequate. The normal population of Block B has already been estimated at about one hundred for Level II. This estimate is based on the following considerations: A detailed study of the figure of Level II reveals about ten groups of rooms centered on more or less large courtyards (Nos. 64, 65, 62, 71, 205, 23, 97, 94, 32, and 169) ; An eleventh group of rooms about the middle of the east part of Block B is entirely composed of small storage rooms and should not be counted for this purpose. A group of rooms like these corresponds more or less to an average house

[^15]of the period, which is usually assumed to be inhabited by about ten persons. ${ }^{10}$ An average house at Priene, a small Hellenistic town, where no slum areas existed, so far as one is able to judge, occupied about 334 square meters; a rustic house in the Fayûm (Karanis, where the density of population was much higher) occupied, on the average, only about 75 square meters. The area of Block B is about 2,800 square meters. On the basis of the Priene calculation, it would have contained about 80 inhabitants, but taking into account the fact that a building of the kind of Block B would contain a large number of retainers and slaves, who would not live under such comparatively ideal conditions as an average citizen of Priene, one hundred souls seems to be a fair estimate. ${ }^{11}$ The number of the dead recorded in Level II was 174 (see Table II, pp. 62-63) during the period of occupation from 43 to 118 A.D. This means an annual death rate of 23.2 per 1,000 , a rate which seems rather unlikely in comparison with modern statistics and conditions. ${ }^{12}$ The infant mortality ( 18 cases, 2.4 per 1,000 ) is impossible.

[^16]Matters become still more incongruous when Level I is considered. The area of Block B occupied by buildings in this level is considerably smaller, since there seem to be only seven groups of rooms centered on courtyards (Nos. 77-79, 192, 208, 190-193, 194, 132, and 61). It would be permissible to estimate the population at some seventy souls. ${ }^{13}$ The number of the dead in Level I during a period of occupation lasting about 100 years ( $118-230$ A.D.) is 79, which means an annual death rate of 10.29 per 1,000 , a low rate rarely reached even under the most ideal conditions at the present time. ${ }^{14}$ Volens nolens, one must conclude that other burial places or other methods for the disposal of the dead, and particularly of infants, were in use, more especially during the period of occupation of Level I. ${ }^{15}$

## MORTUARY BELIEFS

It goes without saying that the people who buried their dead in Block B looked forward to life after death. One should try to determine whether any more definite conclusions may be drawn from the nature of the finds discovered in the various tombs.

The most numerous objects encountered are pottery, glass,

[^17]stone, and metal vessels, jewelry and small articles of daily use. These do not indicate any special beliefs. Objects that would point to particular beliefs are comparatively rare (with the exception of coins; see below). Of these one might mention figurines of terra cotta, stone, and bone, which (usually fragments in robbed graves) were found in only twelve instances. Two of these figurines seem to have been dolls (i.e. in graves 152 and 154). They were definitely so in grave 154 , where the terra-cotta figurine of a reclining woman was placed in the left hand of a child (male?). Such figurines do not have any special significance (various toys occur in three other graves of children). ${ }^{16}$ Nine figurines represented women and were evidently meant to serve as conjugal companions in the future life. These, together with the food and drink placed in the graves, point to a belief in physical enjoyment of life after death, and not merely a spiritual existence. The twelfth figurine is a bone "fetish" in a child's grave (No. 214). This "fetish" is not of the pronounced female type. It is, therefore, either a small doll, or perhaps a symbol of a guardian spirit for the protection of the child from evil powers lurking in the underworld. If so, it implies a belief in dangers after death against which amuletic images protect the dead.

A second group of objects consists of coins. Several coins were found in the débris of various graves, but many penetrated there probably with later débris, and others may have been dropped by robbers, who violated the tombs (this seems quite certainly true of a Sasanian coin of Ardashir I found in vault 2 with post Level I burials). Coins in situ (in the vast majority of burials only one coin to a skeleton) seem to suggest a belief in some sort of small payment due for entrance to the other world. Whether these were ferry dues (cf. the Greek myth of Charon) or represent some other similar belief, it is impossible to say. Wherever the coins were found in situ they were usually in the mouth of the skeleton or in the palm. ${ }^{17}$

[^18]In only a few graves were there coins on the breast ${ }^{18}$ or near the toes.

A third group of objects consists of amulets. Small clay models of arms or legs do not give any indication of their significance. Two bone amulets were of too vague a shape to suggest anything. There remains to be explained only a small bronze dog buried with a child. This, like the fetish of grave 214 , seems to suggest a belief in the necessity of a guardian against dangers in the life to come.

Under this heading belongs also a special class of amulets found, so far as I am aware, only in Babylonia. These are minute models of keys (bronze, in graves 54 and 62; bone, in graves 66,67 , and 159$)^{\circ}$. All, with the exception of the key found in grave 159 , are of the same type (see group of objects from tomb 66, Pl. XIV, Fig. 1). ${ }^{19}$ They were presumably connected with a belief in gates giving access to the other world, which were to be opened with these keys, a theory all the more convincing since the only key recovered in situ (grave 62) was found among finger bones, thus being ready for use by the deceased. It is rather suggestive that no keys have so far been found in graves earlier than those of Level II. Should one conclude that such a belief was unknown to the mixed Hellenistic population of Seleucia till the beginning of the period of Parthianization, beginning with Level II, as pointed out in the first Preliminary Report? ${ }^{20}$ Was this belief a peculiar feature of Parthian religion?

[^19]Burials in Level I
(Approximately 118-230 A.D.)
As a rule, graves that contained objects of value were rifled in ancient times. This seems to have been done by people who knew exactly which were the burials worth plundering and where they were located. Undisturbed burials were mostly those that contained no objects beyond a coin or two (see Table III, p. 64). ${ }^{21}$ Since it is difficult to believe that relatives would plunder their own kin, it may be supposed that the robbers were retainers or slaves employed as undertakers. Though the graves were actually inside the house, it would not have been difficult to obtain access to them, without the knowledge of the masters, since it is hardly to be supposed that the dead were disposed of in living rooms. The burials were probably made in rooms which were rarely frequented.

Only a few graves having objects of value escaped the plunderer. Grave 11 contained the body of a young girl, probably one of the retainers in the palace. She was buried in the northern part of the main block (R. 67) in a small structure of burnt bricks consisting of a pavement on which the body was laid and a rough "saddle-roof" cover. No frame

[^20]was built around the body. It was laid flat on the back, head to the east, face up, with arms and legs extended, and was adorned with full regalia. Two pins were stuck in the hair (when the grave was opened these were found in fragments on each side of the skull). She wore a necklace of various large beads, a few of which were made of a thin sheet of gold over a core, covered with a layer of originally transparent glass, a well-known technique of the Roman period. They were strung on a cord or thin metal wire (fully decayed), and with them were fragments of an iron clasp. A second string of a few beads and a bronze amulet must have been suspended on a long thread (or wire) over the breast. On the right arm were two bead armlets, one above the elbow and one on the wrist. On the left arm was a bead armlet just below the elbow and on the wrist a bronze bracelet. A bronze ring adorned the middle (?) finger of each hand. On the right side of the skull and close against it stood a small bronze vessel (with a cover and a small lead ? chain) containing cosmetics (?). Over the beads at the middle of the chest lay a small glass bottle with a comparatively long stem, also probably for cosmetics or ointments. On the right breast rested a small bronze coin. Between the legs, near the pelvis, was a small two-handled glazed juglet. Against the right knee on the outside stood a second glazed pot of a slightly different type. Just above the right ankle was a small buff juglet (unglazed). These three pots doubtless contained originally foodstuffs or drinks. Over the left knee lay a small pottery model of a couch on four short, stumpy legs. The burial was slightly disturbed by an inexperienced digger before it was noticed, but from the sifting of the disturbed débris were recovered a few more beads, fragments of a glazed bowl (for food or use at meal time ?), and a small bronze lamp, the original position of which could not be ascertained (see Pl. XIV, Fig. 2, the group of objects from grave 11, with the exception of a glass bottle, which was too fragile to risk unpacking in camp for photographic purposes).

Grave 17 contained the body of a very small child, in a torpedo-shaped jar, which was placed on its side in the east wall of Room 69, near the southeast corner. The mouth of the jar was too narrow to receive the body; therefore the upper part of the pot was broken off, the body inserted, and the broken part restored to its place. The mouth of the jar was stopped with a burnt brick (see Pl. XV, Fig. 1). At the time of the burial the jar must have been filled with earth mixed with lumps of plaster and charcoal. This was apparently a disinfecting precaution to help the speedy dissolution of the flesh and prevent undue lengthening of the period during which it would emit offensive odors, since such lumps were found in practically all tombs of Levels I and II. In some burials they were found in large quantities in the space between the ribs and the pelvic bones of various skeletons. Should one conclude that the dead bodies were eviscerated before burial (as in Egypt) and that the abdominal cavity was stuffed with lumps of plaster and charcoal? The bones of the child in the jar were so badly decayed that nothing could be learned about the position of the skeleton or the objects, with the exception of the general location of the skull near the bottom of the jar. From the débris in the jar there were recovered forty-four carnelian and glazed beads, two bronze earrings, one bronze bracelet in fragments, and a fragmentary bone hairpin.

Grave 26, in a hollow made in the west wall of R. 110 (near the southwest corner) just above the floor level, contained the body of a young woman. The hole in the wall was closed with two courses of square burnt bricks placed on their narrow edges one above the other (see Pl. XV, Fig. 2). The body was laid on its back, with the head to the south, face up, legs fully extended, right arm at the side with the hand resting on the right half of the pelvis, left arm bent at an angle of $90^{\circ}$ at the elbow across the chest, with its fingers touching the right elbow. Two strings of beads adorned the throat: one close fitting, consisting of minute green-glazed beads, the
other longer, consisting of various shell, stone, glass, and glazed beads of larger size. A third string of a few large stone and glazed beads must have been suspended on a long thread over the chest (cf. note on burial 11). Near the fingers of the right hand was a large rectangular yellow glass plaque, now reduced to dust, which may have been intended as an inset for a ring. In the left hand was a small bronze mirror, broken. Over the vagina was a large elongated lump of plaster. ${ }^{22}$

Here it should be noted that such lumps of plaster or potsherds over various limbs were observed in several tombs. In grave 9 a potsherd was placed over the right breast and another over the vagina. In grave 24, that of a male, three potsherds covered the mouth, possibly symbolizing the silence imposed by death. One was laid over the genitalia. These two burials belong to Level I. In grave 39 (Level III) potsherds protected the eye sockets of the second and third skeletons. The grave contained three skeletons. For the symbolic meaning compare the well-known Jewish legend about Alexander the Great at the gates of Paradise. ${ }^{23}$ In grave 128 (Level II) a potsherd was found on the right breast of skeleton 1.

Grave 48, an open burial of a child under the ground level of the courtyard in Level I (No. 208), was completely scattered by an inexperienced digger; the sifting of the débris yielded one bronze ring, twenty clay, stone, shell, and glass beads, as well as a small bronze pendant in the shape of a dog (concerning its probable amuletic significance, see page 42). It is interesting to note that similar amuletic figurines were purchased from neighboring Arabs. These include a dog, a cat, and an ithyphallic figurine of a man. These figurines may also have been originally found in graves.

Two more burials should be mentioned here. Grave 14 contained two bodies laid under the pavement of the northern iwan in Level I (R. 71). They were undoubtedly buried together, since the head of the one was laid on the head of the

[^21]other, the upper one ( F ) was oriented to the east, while the lower one (M) was laid with the head to the west. The burials had not been disturbed when uncovered, yet several bones were missing and others broken. From the female skeleton there were missing the left half of the pelvis, the left thigh bone, ${ }^{24}$ all lower leg bones, the right arm bones, and all finger bones. The right thigh bone was broken above the knee (ancient break). From the male skeleton were missing all arm bones and both shoulder blades, as well as all lower leg bones; both thigh bones had been broken above the knees in antiquity. In addition, all ribs were crushed and the left temple was bashed in. It is impossible to see in these highly mutilated bodies merely the results of havoc wrought by tomb robbers, who usually scatter all the bones, but leave them around the tomb. In this case the bones that were in the grave were all adhering; the others could not be found. One is rather forced to the conclusion that this grave represents the burial of people tortured to death, and since the mortal remains are those of a man and a woman, it does not seem too wild a flight of fancy to see in their condition punishment inflicted for adultery.

Burial 15 also seemed to contain remains of one who had not met with a natural death. The body was hidden in the north wall of Room 113, Level I (within the wall, not along its surface, as usual), with only the head and shoulders protruding. There can be little doubt that the body had been laid in the wall when it was built. The right leg was bent triangularly at the knee and raised high above the level of the head. The courses of bricks between the two legs were undisturbed and the layers of reed mats between the courses

[^22]stretched right through the width and the length of the wall. The head, thrown far back, and the highly contorted jaws (see Pl. XVI, Fig. 1) are proofs that the man was buried alive in the wall, while it was being erected; in an effort to free himself from the fresh brickwork he must have broken his spine (it was broken just above the sacrum). One does not greatly relish the way capital punishment seems to have been inflicted in ancient Parthia!

Burials in Level II<br>(Approximately 43-118 a.D.)

It has already been mentioned that coffins make their appearance in this level. About 25 per cent of the graves contain drab pottery coffins of oval shape (average about 180 by 40 by 18 cm .). Coffin burials are either open (see Pl. XVI, Fig. 2) or placed under a small square frame of baked bricks covered with the usual "saddle-roof" of similar material (see Pl. XVII, Fig. 1). These and other burials very frequently contain two or more bodies, a phenomenon almost unknown in Level I.

Another characteristic of this level which disappears in Level I is the vaulted family (?) tomb containing remains of a large number of bodies. In both forms of burial it is quite obvious that the graves were reopened from time to time and that fresh burials were added.

Of the few undisturbed burials containing objects (see Table III, p. 64) only one is worth mentioning here. Grave 163 (see Pl. XVII, Fig. 2) under the pavement of Room 60 (Level II) in the southwest corner, along the west wall, contained the body of a young (?) woman laid flat on the back, with the head to the south, face up (skull crushed by digger), in a simple burial over three baked bricks, one each under head, loins, and feet. The legs were fully extended, but the toes of each foot were turned in so that they touched; the arms were extended at the sides, then folded at the elbows, the fingers of each hand touching their respective shoulders. A string of
banded agate and hematite beads, beautifully polished, must have formed an armlet on the left arm (about the elbow?). The sifted débris yielded a small glazed inset and a hornshaped bone amulet. Under the spine were some gold threads. Such very thin curly filaments of short length are a puzzle. The likeliest suggestion seems to be that they were plaited into the hair of the deceased (both men and women), since in undisturbed graves they are found either under the skull or under the spine (at the end of long tresses let down along the back?).

Another feature absent in the burials of Level I, but found in all preceding levels, is the presence of thin gold-foil fragments, with which the head, neck, and shoulders, and perhaps the whole upper part of the body, were covered. Their absence in Level I is probably due not to any change in custom, but to the economic decline, traces of which have already been noticed in several places above. Gold threads occur in Level I, though rarely; however, they entail less expense, since they are thinner and are used in much smaller quantities than gold foil.

By far the richest finds were made in the robbed family vaults. Some had been robbed so thoroughly that nothing but gold foil or a couple of beads or lamps were recovered from the débris (as in vaults 41 and 90 ); in others, the thieves were less thorough and left a good deal of plunder behind them. Vault 131 (see Fig. 8 and Pl. XVIII, a flash-light picture of the interior of the vault as it was when first uncovered) was situated in the southern part of a courtyard (No. 64, Level I). It contained four loculi (or cubicles) divided by low burnt-brick partitions, within which the bodies had originally been laid. When the tomb was robbed the bodies were torn up and thrown into the central open space, and here were found remains of at least fourteen. Among the bones were found: one prismatic glass seal bead; three small gold earrings (see Pl. XIX, Fig. 1, second and third from left, bottom line) ; two gold plaques decorated with embossed ibises standing on

one foot, to which are applied tubular perforations on the back, thus converting them into beads (see Pl. XIX, Fig 3) ; ${ }^{25}$ one disk of sheet gold, decorated; two gold-frame lockets (?), one set with jasper, the other inset missing; see Pl. XIX, Fig. 1, top line, middle) ; thirty-six various, semiprecious stone, glass, amber, gold, bitumen, and glazed beads, of which one, dateshaped, ${ }^{26}$ had tips of thin-hammered sheet gold at both ends; another oval, was an onyx set into a gold frame, perforated for stringing (see Pl. XIX, Fig. 1, top line, on left) ; two dark garnets, which must have represented originally two tiny human figurines, but which are now broken so that only the heads remain, exquisitely modeled negroid types with inset glazed eyes (see Pl. XIX, Fig. 2) ; one glazed and carnelian pendant (the glazed pendant with a string of selected beads, Pl. XIX, Fig. 4; for the carnelian pendant compare Pl. XIX, Fig. 5, top line extreme left) ; five gold tips for beads (see description above), and one small gold link. In cubicle 1 were found a gold bead and in cubicle 3 a gold pendant (small, possibly part of an earring). Apart from the jewelry the tomb contained eleven glazed lamps, two of which were found in the niche in the back wall as though set there by either the undertakers or the thieves (see Pl. XVIII), a small glazed ointment pot, a knucklebone, two small bronze coins and some bronze fragments, a lump of yellow frit or pigment (sulphuric?) and a large quantity of gold and electrum foil and threads (for their uses see above).

A still larger group of finds comes from a ransacked vault, No. 159. This is by far the largest vault found to date either

[^23]in Block B or outside it in other parts of the site. It was situated in Room 235 (Level II) below the floor level of the early occupation, and it contained eight cubicles (see Pl. XX, Figs. 1-2, also text Fig. 9). The spoils left behind by the ancient robbers and gathered by the expedition include: two hundred various semiprecious stone, glass, shell, bitumen, bronze, amber, malachite, bone and glazed beads, four of which are stones (one missing) set in gold frames; a fragment in gold frames; a fragment of a bronze clasp; one marble (?) pendant seal, one stone cylinder seal (probably early Babylonian, found and used as an amulet by the people of this late Parthian period; see Pl. XXI, Fig. 3); eleven pendants of silica, bone, mother-of-pearl, carnelian, amber, gold, bronze, and serpentine (?); eighty-six insets, of which one is a mossagate intaglio representing Jupiter (see Pl. XXI, Fig 5), one a pebble, and the rest small glass and glazed insets of various shapes; one bronze and two gold earrings (see Pl. XXI, Fig. 2, bottom line, middle, and Pl. XIX, Fig. 1, bottom line; extreme left) ; one fragment of sheet gold; one bronze coin pierced, probably worn as a piece of jewelry after the manner of the Bedawî women of today; ${ }^{27}$ a terra-cotta arm and leg, amuletic or votive in character; one small amuletic bone key (for the possible significance of this amulet see above) ; one fragment of a bone "fetish"; fragments of two bone figurines (one head and one body; one headless alabaster figurine of a nude woman; fragment of the head of a terra-cotta figurine; one glass whorl and one made of bone; one bone inlay (?) piece; one bronze hairpin; three glass ointment (?) bottles, mostly broken; fragments of a burnished buff pottery bottle; three glazed bowls; three pot covers, one glazed; one jug; fragments of two large pots (for foodstuffs?) ; twelve glazed lamps; one plaited cloth (?) wick for a lamp (burned) ; fifty small bronze coins; some small ringlets (possibly leather? strappings for lashing an implement to its handle?) ; a bitumen ball (for unknown use) ; and a large quantity of gold foil and threads.

[^24]

FIGURE 9

In this connection there should be mentioned a vaulted tomb (No. 2) discovered outside Block B (in T.T. 18), which, in view of the depth of the overlying building with which it was probably associated, must be assigned to Level II at the latest, possibly to Level III (see Plan I and Pl. XIII of the first Preliminary Report). This vault was also plundered in ancient times, but the gleanings of the expedition were two strings of beads of lapis lazuli and gold, a fine set of five pendant seals, some intaglio insets, and several other objects (see Pl. XXI, Figs. 1, 4, and text Fig. 10).

These finds from the vaults, interesting in themselves, are not so instructive as those from the poorer graves of Level I described above, since they were not found in situ.

Here should be described another burial, though not of a human being. Under the foundations of the burnt-brick pier (or door jamb) on the west side of the main entrance to the building (doorway between Rooms 150 and 61, Level II) was found the carcass of a pig. It was adorned with a necklace of several glazed beads; near its chest were some fragments of sheet bronze (so broken up that it was impossible to identify either their original shape or use) and a lump of ochre. On the ribs were fragments of one bronze and two bone hairpins (?) and a bone figurine of a woman laid face downward; near by was a small bronze coin. Obviously here was a foundation offering made to the genii protecting the entrance of the house.

One more tomb may be mentioned. Resting immediately on the south end of the burnt-brick superstructure of grave 150 was a heap of ashes and charcoal covered with potsherds. In the heap there were charred bones of a small bird and of a pig's jaw. Of course, it is always possible that the heap in question had nothing to do with the burial; however, in view of its position immediately over the cover of the grave, there is reason to think that it represents remains of a funerary meal eaten on the grave of the departed (hardly a burnt offering to the deceased himself).


FIGURE 10

# Burials in Level III (Approximately 140 B.c. -43 A.D.) 

It has already been pointed out that the great cultural change in the life of Seleucia comes between Levels III and II, at the close of the great revolt, after 43 A.D. The probable reason has also been suggested. ${ }^{28}$ This change may be observed in the graves also. Three features are found in the graves of Level III which disappear entirely in Levels II and I: (1) slipper coffins, both glazed and unglazed, (2) glazed coffins in general, (3) cloth shrouds.

The excavations at Nippur have revealed in the Parthian level a large number of glazed coffins and drab pottery slipper coffins, practically no traces of which were found in Seleucia during the first four seasons. The fact was so striking that one began to wonder about the correctness of the Nippur dating. It was only during last season (1931-32), when the whole top part of Level III was uncovered, that the solution of the puzzle presented itself. Both glazed coffins and slipper coffins began to appear in considerable numbers in Level III. This fact is highly important, for it not only vindicates, in a general way, the date attributed at the time to the Nippur finds, but helps to fix more precisely the date of the "Parthian" level at Nippur. "Parthian" is used here intentionally, for though it is quite correct that the period is to be considered Parthian so far as political domination is concerned, culturally it seems that it is still to be counted as the continuation of Hellenistic influence. The Parthianization of the country followed only later in the first century a.D.

With Level III, and especially with slipper coffins, there seem to be associated cloth shrouds for wrapping the bodies of the dead. There were four graves that contained slipper coffins (Nos. 205, 209, 221, and 229). Of these, one (No. 229) was found empty, one (No. 221) thoroughly disturbed and broken up; the other two (see Pl. XXII, Fig. 1) contained remains of cloth shrouds. Apart from these, traces of cloth

[^25]shrouds were found in four more graves of Level III (Nos. 156 , skeleton $12 ; 219$, skeleton $5 ; 220$ and 234). In one other case the attribution of the grave (No. 213) was not certain (in either Level II or III). The coffin in which the body was laid was broken by a wall of a late phase of occupation of Level II. The grave might, therefore, have belonged to the early occupation in Level II, but in view of the presence of the shroud, no example of which has as yet been found in any grave later than those of Level III, this grave also is probably to be dated in Level III.

No undisturbed graves of this level deserve mention, since they contained no objects at all, or the finds were very few and unimportant. One feature, however, common in this level, is worth noting. To a still greater degree than in Level II the graves of this level become multiple burials. In some the heaping of skeletons in various coffins, jars, and burntbrick structures, or without them, transcends all possibilities of family graves. Thus, while the graves of Level II (apart from family vaults) contain no more than three or four bodies, ${ }^{29}$ and even the vaults contain remains of a comparatively small number (vault 90, ten bodies; vault 131, fourteen bodies; vault 159 , fourteen bodies), some multiple graves of Level III revealed remains of a much larger number of dead. Similarly grave 132 contained eight skeletons, No. 156, nineteen (not counting the nine uppermost burials, which may have been put away in this room during the early phase of occupation of Level II; see, e.g. Pl. XXIII, Fig. 1, showing the uppermost layer of burials in this grave belonging to Level III). Grave 158 contained seven bodies, grave 172, seventeen; grave 179 , nine; grave 231, fourteen; grave 232, seven; while a small family vault (No. 217, much smaller than those of

[^26]

FIGURE 11

Level II and having only two loculi; see below) had remains of at least thirty-three skeletons. In the majority of these instances the bodies were put away pellmell in various receptacles or without them, in one case even along several walls of the same small room (grave 156). All these graves seem to belong to the latest phase of Level III (in some rooms of this level there are traces of five different levels of occupation during this period). One is tempted to connect this phenomenon with the last revolt of the city against Parthian rule. Since the skeletons bore no traces of wounds inflicted in war, and since they include several bodies of women and children, they probably represent not the remains of people actually fallen in battle, but civilian casualties from starvation and epidemic, which would naturally ensue in a besieged city of such proportions; the population no doubt would be still more crowded by numbers of refugees from the country.

Of the tombs that yielded some articles of value only vault 216 seems worthy of mention (see Fig. 11 and Pl. XXIII, Fig. 2). Though obviously plundered in ancient times, it produced some articles of jewelry (two small gold earrings and several beads), many pieces of pottery (twelve lamps, one glazed bowl, one buff pot, and two burnished buff pottery bottles), and a number of coins, as well as a large amount of fragmentary gold foil.

The discussion given above is only a preliminary report. It will be noticed that several problems connected with this material have not been discussed at all. Here may be mentioned the problem of race and the peculiarities of the osteological material, details which necessitate further research by specialists. A complete study of the technique of funerary architecture and of the objects found in the graves is reserved for the final publication.

TABLE I

## Orientations of Heads and Faces of Bodies in Various <br> Levels

|  | Axis Running N-S |  | Axis Running W-E |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Head | Face | No. of <br> bodies | Total | Head | Face | No. of <br> bodies | Total

LEVEL I
28 burials, 39 bodies 23 burials, 25 bodies

| N | S | 3 |  | W | E | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N | Up | $\underline{2}$ | 5 | W | Up | 3 | 4 |
| N | E | 4 |  | W | S | 4 |  |
| N | W | 2 |  | W | N | 3 |  |
| N | ? | 10 | 16 | W | ? | $\underline{2}$ | 9 |
| S | N | 1 |  | E | W | 1 |  |
| S | Up | 6 | 7 | E | Up | 5 | 6 |
| S | E | 3 |  | E | S | 2 |  |
| S | W | , |  | E | N | 3 |  |
| S | ? | 5 | 9 | E | ? | 0 | 5 |
| ? | ? | 2 | $\frac{2}{39}$ | ? | ? | 1 | $\frac{1}{25}$ |

LEVEL II

*In the columns of numbers the vaults are represented by one unit each and not by the actual number of bodies in them.

TABLE I (Continued)


LEVEL IV
4 burials, 4 bodies
4 burials, 9 bodies

| N | N | $\frac{1}{1}$ | 1 | W | $?$ | $\frac{1}{2}$ | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| N | Up | $\frac{1}{2}$ | 1 | E | W | $\frac{2}{1}$ | 2 |
| N | $?$ | $\frac{1}{2}$ | 1 | E | N |  |  |
| S | $?$ | - | 1 | E | $?$ | $\frac{3}{2}$ | 4 |
|  |  |  | - | $?$ | $?$ | $\frac{2}{-}$ | $\frac{2}{9}$ |

*In the columns of numbers the vaults are represented by one unit each and not by the actual number of bodies in them.

TABLE II
Number of Bodies in Tombs of Various Levels

| LeVEL |  |  | LeVEL II |  |  | LEVEL | III |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

TABLE II (Continued)

| Level I |  | Level II |  | Level III |  | Level IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of grave | No. of bodies | No. of grave | No. of bodies | No. of grave | No. of bodies | No. of grave | No. of bodies |
| 69 | 1 | 136 | 3 | 217 | 1 |  |  |
| 70 | 2 | 137 | 2 | 219 | 4 |  |  |
| 71 | 1 | 138 | 2 | 220 | 1 |  |  |
| 73 | 2 | 140 | 1 | 221 | 1 |  |  |
| 75 | 3 | 141 | 2 | 222 | 1 |  |  |
| 76 | 1 | 142 | 1 | 224 | 1 |  |  |
| 77 | 1 | 143 | 1 | 225 | 1 |  |  |
| 78 | 1 | 144 | 1 | 227 | 1 |  |  |
| 80 | 1 | 145 | 2 | 229 | 1 |  |  |
| 81 | 1 | 146 | 1 | 230 | 1 |  |  |
| 82 | 1 | 147 | 1 | 231 | 14 |  |  |
| 84 | 1 | 148 | 1 | 232 | 7 |  |  |
| 88 | 1 | 150 | 1 | 234 | 1 |  |  |
| 92 | 1 | 152 | 1 |  |  |  |  |
| 93 | 1 | 156 | 9 |  |  |  |  |
| 94 | 1 | 157 | 1 |  |  |  |  |
| 96 | 1 | 159 | 14 |  |  |  |  |
| 102 | 1 | 160 | 1 |  |  |  |  |
| 103 | 2 | 161 | 1 |  |  |  |  |
| 104 | 1 | 162 | 1 |  |  |  |  |
| 106 | 1 | 163 | 1 |  |  |  |  |
| 111 | 1 | 164 | 7 ? |  |  |  |  |
| 114 | 1 | 167 | 1 |  |  |  |  |
| 115 | 1 | 169 | 2 |  |  |  |  |
| 122 | 1 | 171 | 1 |  |  |  |  |
|  |  | 173 | 1 |  |  |  |  |
|  |  | 183 | 1 |  |  |  |  |
|  |  | 190 | 1 |  |  |  |  |
|  |  | 199 | 1 |  |  |  |  |
|  |  | 200 | 1 |  |  |  |  |
|  |  | 201 | 1 |  |  |  |  |
|  |  | 203 | 1 |  |  |  |  |
|  |  | 204 | 1 |  |  |  |  |
|  |  | 206 | 13? |  |  |  |  |
|  |  | 207 | 3 |  |  |  |  |
|  |  | 210 | 1 |  |  |  |  |
|  |  | 211 | 1 |  |  |  |  |
|  |  | 212 | 2 |  |  |  |  |
|  |  | 213 | 1 |  |  |  |  |
|  |  | 214 | 1 |  |  |  |  |
|  |  | 228 | 1 |  |  |  |  |
| Total: |  |  |  |  |  |  |  |
| 66 | 79 | 82 | 174 | 54 | 206 | 8 | 13 |

## TABLE III

Comparative Table of Objects Found in Undisturbed Graves

| Level I |  |  | Level II |  |  | Level III |  |  | Level IV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No objects at all | Few and unimportant objects | Valuable objects | No objects at all | Few and unimportant objects | Valuable objects | No objects at all | Few and unimportant objects | Valuable objects | No objects at all |
| Nos. 9 | 10 | 6 | 29 | 144 | 120 | 33 | 30 |  | 208 |
| 49 | 18 | 11 | 74 | 146 | 163 | 34 | 32 |  |  |
| 53 | 20 | 17 | 83 | 214 |  | 158 | 139? |  |  |
| 56 | 24 | 26 | 86 |  |  | 185 | 217 |  |  |
| 58 | 47 | 48 | 87 |  |  |  | 230 |  |  |
| 59 | 63? | 55 | 91 |  |  |  |  |  |  |
| 60 | 64 | 66 | 97 |  |  |  |  |  |  |
| 65 | 88 | 82 | 98 |  |  |  |  |  |  |
| 71 | 112 |  | 99 |  |  |  |  |  |  |
| 73 |  |  | 107 |  |  |  |  |  |  |
| 76 |  |  | 108 |  |  |  |  |  |  |
| 77 |  |  | 111 |  |  |  |  |  |  |
| 78 |  |  | 116? |  |  |  |  |  |  |
| 79 |  |  | 119 |  |  |  |  |  |  |
| 84 |  |  | 121 |  |  |  |  |  |  |
| 94 |  |  | 135 |  |  |  |  |  |  |
| 102 |  |  | 137 |  |  |  |  |  |  |
| 114 |  |  | 147 |  |  |  |  |  |  |
|  |  |  | 148 |  |  |  |  |  |  |
|  |  |  | 167 |  |  |  |  |  |  |
|  |  |  | 173 |  |  |  |  |  |  |
|  |  |  | 183 |  |  |  |  |  |  |
|  |  |  | 203 |  |  |  |  |  |  |
| Total: |  |  |  |  |  |  |  |  |  |
| 18 | 9 | 8 | 23 | 3 | 2 | 4 | 5 |  | 1 |

PLATE XIV


Fig. 1. Contents of tomb 66, Level I


Fic. 2. Contents of grave 11, Level I


Fig. 1. Jar burial of grave 17, Level I


Fig. 2. Grave 26, Level I


Fig. 1. Burial 15, Level I


Fig. 2. Pottery coffin from grave 111, Level II


Fig. 1. Grave superstructure, Level II


## PLATE XVIII



Fig. 1. Inter:or of vault 131, Level II


Fig. 1. Gold jewelry


Fig. 2. Garnet figurine, head of negroid type


Fig. 3. Gold beads with embossed ibises


Fig. 5. Carnelian pendant (figure at left, top row) and other jewelry

Fig. 4. Glazed pendant with beads

PLATE XX


Fig. 1. Exterior of vault 159, Level II


Fig. 2. Interior of the same vault


Fig. 1. Jewelry from vault 2, Level II


Fig. 2. Jewelry from vault 159. Level II


Fig. 5. Moss agate intaglio of Jupiter from vault 159


Fig. 1. Grave 205, Level III


Fic. 2. Exterior of grave 164, Level III


Fig. 1. Grave 156, Level II


Fig. 2. View of vault 216, Level II, looking east

# III. SOME PARTHIAN JEWELRY 

(Season 1930-31)

## By ROBERT J. BRAIDWOOD

Two important caches of Parthian ${ }^{1}$ jewelry were found during the season of 1930-31. The nature and unusual character of their contents justify their special study and publication here.

Both caches belong to Level II, which may be dated between 40 A.D. and 120 A.D. The probability that the several pieces of each cache make up what may be called a set indicates that they were hidden rather than lost. The occasion for concealment may very well have been the advance of Trajan on the city during his campaign of $115 / 116$ A.D.

## DESCRIPTION OF THE FINDS

The first cache of jewelry was a single pair of earrings, which were discovered lying unprotected 170 cm . beneath the floor of the latest occupation of Room 65. They are of the "disk-and-pendant" type (see note 8 ). The disks are made of gold with insets of garnet and altered turquoise (?). ${ }^{2}$ The pendants consist of twisted gold wire tipped with pearls. ${ }^{3}$ The clasps are rings, the top segments of which have been cut out and fastened in place again by a pin on the back part of the ring. This allowed the segment to articulate like a hinge. Holes for the insertion of another pin were provided in front, so that the movable segment might be passed through a hole in the ear of the wearer and fastened in place by inserting the pin in front. The earrings are in a perfect state of preser-

[^27]vation, with the exception of a pearl missing from one of the pendants and the loss of one inset of altered turquoise (?). Each earring is 0.057 m . in length and 0.030 m . in width, and weighs 16.2 grams (see Pl. XXIV, Fig. 1). ${ }^{4}$

The second cache of jewelry contained eight pieces. They had been placed in an unglazed pot and buried under the floor of Room 52. The base material of all the objects is gold.

The signet ring (No. 1) is set with a garnet on which is engraved the figure of a peacock. It is perfectly preserved. The garnet is elliptical and is 0.011 m . long. The ring itself is not round; the major diameter parallel with the face of the garnet is 0.023 m .; the minor diameter perpendicular to it is 0.018 m . The weight is 12.3 grams (see Pl. XXIV, Fig. 2) .

The other ring (No. 2) has one face decorated with a disk. The design on the disk is a geometric rose, and the areas between the elements of the design are pierced. Under the disk the band of the ring itself is pierced in a design. There are two bands of chevron ornament running completely around the ring, with the exception of the area under the disk. The edges show signs of wear, the gold being worn down almost to the chevron bands. The ring is nearly round; its diameter is 0.022 m ., and the width at the disk is 0.019 m . (see Pl. XXIV, Fig. 2).

The circular pendant (No. 3) is in design a geometric rose, backed with thin gold and has a border of gold decoration in a laurel pattern. The elements of the rose and the inner border are glass paste, yellow and white respectively; the inclosed triangles are altered turquoise (?). Each element of the design is isolated by a narrow border of gold, and there is a small gold sphere at the very center of the rose design. Two small rings of heavy gold wire by which it might be suspended from a chain or string of beads are attached to the top of the pendant. Its diameter is 0.032 m . (see Pl. XXIV, Fig. 2).

[^28]The pair of earrings (Nos. 4 and 5) are of the "amphora" type, hung with seven small pendants in the form of hollow gold pomegranates tipped with small pearls. The amphora or main element of each earring is a hollow gold sphere pierced in six places both above and below a central band. This band is made up of triangular glass insets in a running design of red and white. The glass is opaque; its structure is very similar microscopically to that of porcelain. The piercings of the sphere are parabolic, and are bordered with a fine line of granulation, as are the elements that make up the neck and handles of the amphora. The clasps are units in themselves, being fastened to the lower part by means of gold rings; they function in the same way as those described on the earrings of Cache I. The pearl terminations of some of the pomegranates are missing, and the two rings which join the clasps to the main elements of the earrings are almost worn through at their points of contact. ${ }^{5}$ The over-all length of each earring is 0.065 m ., and the major diameter is 0.022 m . Each earring weighs 14.0 grams (see Pl. XXIV, Fig. 2).

The pendant or nose ring (No. 6) is of the same type and much the same design as that of the earrings just described. The central band, however, is not set with glass, but has two plain gold bands as borders inside which are small circles of gold at regular intervals. Granulation appears only around the parabolas, not on the neck or handle of the amphora. The small pendants differ from those on the earrings in that two kinds of design are used, the hollow gold pomegranates (but without the pearl terminations) alternating with forms in hollow gold which are a half-section of a cylinder. The seventh pendant, which should hang from the center of the base of the amphora, is missing, as is also the clasp. It is interesting to note that the ring of gold wire which once fastened the amphora to the clasp had been worn through,

[^29]or nearly so, and had been repaired with a wrapping of heavy gold foil. As already indicated, a similar repair would have been necessary for the earrings had they not been hidden and lost. The length of the pendant is 0.038 m ., and the maximum diameter 0.017 m . It weighs 5.5 grams (see Pl. XXIV, Fig. 2).

Each of the pair of bracelets (Nos. 7 and 8) has a main band of a loop-chain technique. The terminations, which hold rings of gold wire, perhaps for tying the bracelet on the wrist, are set with garnets and altered turquoise (?) (see note 2 ). The terminations are parabolic, a shape to which the garnet insets conform, but the altered turquoise (?) inset is in the form of a conventionalized heart. The insets are bordered with granulation, and three rosettes of granulation are on each termination. A pin which joins the main bands to the terminations is decorated with pearls on either end. The main bands are composed of six strands of loop chains running lengthwise from end to end, held together by transverse bands of thin strips of gold which pass across and around the chains between the loop knots. These transverse bands are usually soldered on the reverse side of the bracelets. They bear decorations in the form of longitudinal grooves along their surfaces, and have been pressed slightly inward between the strands of the loop chains (see Pl. XXV, Fig. 1). The length of each bracelet is 0.187 m. , the greatest width 0.023 m ., and the weight 19.1 grams (see Pl. XXIV, Fig. 2).

## ANALYSIS OF FINDS

Of all the articles of personal adornment thus far uncovered at Seleucia there has been no jewelry which can compare with the two caches here described. To judge from the rarity of such finds it seems logical to suppose that this jewelry represents some of the finer forms of personal adornment of the time. In this sense it is an indication of the tastes of the Parthian upper classes. It cannot, however, be immediately assumed that this material is a reflection of the
general aesthetic judgment or the craftsmanship of the Parthians, and it is quite certain that most of the types of design shown are not indigenous to Seleucia and probably not to the Parthians in general. A brief survey of ancient jewelry shows a variety of parallels.

The pair of earrings of Cache I, so far as I can ascertain, marks the first recovery of ancient pearls from Mesopotamia. Pearls came into use in ancient jewelry about the beginning of the Hellenistic age and examples from Roman times are to be found at many sites in the ancient world. ${ }^{6}$ They seem to have come from the Near Eastern area, probably from the Persian Gulf. ${ }^{7}$ The pearls of the earrings were suspended by means of twisted coils of gold wire, a technique which is familiar in the jewelry of the time. ${ }^{8}$ The clasp seems to be unique and is not even mentioned in Hadaczek's classic work on earrings. ${ }^{9}$ The all-over design of the earrings is a development of the "disk-and-pendant" type and is reproduced with surprising accuracy in the Roman examples shown by Marshall (as cited in note 6, Pl. LV, 2668), which he dates as third century A.D.

The eight pieces of Cache II probably represent the jewelry of a lady of high rank. It would be unsafe to assume that they all came from the hand of the same craftsman, although the earrings and the amphora pendant and perhaps the bracelets are of a uniform technique.

[^30]The signet ring has no other decoration than that on the garnet seal itself. The metal of the ring was carefully worked and polished into a simple and pleasing form, and the depression for the seal was accurately ground, so that the face of the seal would be flush with the surface of the ring. The quality of the engraving on the seal is equal to that of the average cut gem of Hellenistic times. The figure engraved, that of a peacock, is well composed in the elliptical form of the setting. The peacock was often represented on gems of this period. ${ }^{10}$ A seal impression on one of the bullae from Seleucia is of a peacock and may be assigned to the first half of the second century в.с. If it is assumed that the jewelry of Cache II was of individual pieces collected to make a set, this ring might well be the oldest on the basis of the severity of its design.

The ring with the pierced disk (Cache II, 2) and the circular pendant (Cache II, 3) both have a geometric rose decoration. Simple as this pattern is, it seems to be without parallel in the jewelry or even in the general ornamental style of the Hellenistic age, nor does it seem to occur in this simple form in Roman ornamentation. The exact pattern did appear in Assyrian times, however, on the step triangle merlons of the battlements at Asshur and Warka, and is seen on the architectural decoration of Parthian and later times. ${ }^{11}$ It is also possible that the four piercings which occur on the band of the ring directly under the disk are meant to isolate in the metal three forms which recall the step triangle merlons themselves. It is impossible to be sure of this point, however, since the piercings are not clean cut, but the resemblance of the isolated forms to merlons is quite striking.

Another point of interest in the pendant is the outer border, which has the appearance of a laurel wreath. The

[^31]Egyptians had a technique which produced such an effect; it consisted of the intertwining of two pairs of flat gold wires, each pair of which had first been twisted together. ${ }^{12}$ These were then soldered on the object as in filigree work.

The pair of earrings (Cache II, 4) and the spherical pendant are variations of the "amphora" type described by Marshall. ${ }^{13}$ It will be noted that the amphoras of Cache II have a spherical form except for the protrusion of the neck, whereas all the examples which Marshall and others show have pointed or modeled bases. The clasps of the earrings are similar to those on the earrings of Cache I. As we have already noted, they seem to be without parallels in the jewelry of the time.

The granulation on the earrings, the pendant, and the bracelets of Cache II is a feature of ancient jewelry that had a wide distribution and a long history, as is indicated by Marshall. ${ }^{1+}$ The pendants of the earrings and the large pendant (No. 6) are also of a familiar form. The use of pomegranates on ancient jewelry was widespread, ${ }^{15}$ and there are examples of hollow semicylindrical pendants, which may have been conceived of as miniature bells. ${ }^{16}$ The general design of the earrings and pendant nose ring with pierced amphoras is not common; it probably resulted from the desire to reduce the weight of the objects without detracting from the effectiveness of their design.

Two points of importance appear from a study of the bracelets: the technique used on the main bands seems to be unique, and the use of the conventionalized heart shape appears to be without precedent in the ornament of ancient

[^32]times. The main band of the bracelets has already been described; the loop chain is a familiar technique, being common to ancient jewelry in the Mediterranean area from earliest times, ${ }^{17}$ but the method of tying these chains together by means of the transverse bands does not seem to have a parallel (see Pl. XXV, Fig. 1). It is not to be understood, of course, that the heart-shaped pattern on the terminals has necessarily the same symbolism that it does today; the point is merely that this form does not seem to have been used in ancient design. It remains to be observed that the bracelets in their present form are of a length which would be too great for the wrist of the average woman. This may mean that they were worn higher on the arm, or that the wire rings on either termination were later additions, or even that they were worn on the ankle.

In conclusion, it may be well to list what seem to be the contributions to our knowledge of ancient jewelry which the Seleucia finds make. So far as the studies have progressed the unique features of this material appear to be:

1. The first appearance of pearls in Mesopotamia;
2. A hitherto undescribed type of clasp on earrings;
3. The use of the geometric rose pattern;
4. An amphora type of earring of spherical form which is also pierced;
5. A new technique for making webbed chain bands;
6. The use of the conventionalized heart-shaped pattern.

It must be admitted, however, that these pieces of jewelry, with the possible exception of the pierced ring and the circular pendant, have all-over patterns of design which find definite counterparts in jewelry from almost any part of the Graeco-Roman world. The design of the two exceptions may possibly be indigenous to Mesopotamia.

The jewelry of these two caches well illustrates the

[^33]changes in form and design which were taking place in ancient jewelry from the beginning of Hellenistic times. Greek jewelry of the Hellenic age had been given to the imitation of natural form, delicate patterns in filigree, a very slight use of precious stones. With the conquests of Alexander in the Orient and the resultant change in artistic taste come the use of a variety of precious stones and a decline in the vogue of natural form and delicacy of proportion. By Roman times the desire was mainly for color. Form and surface treatment were adapted in whatever way would best set off the stones. ${ }^{18}$ The earrings of Cache I and the circular pendant are splendid examples of this tendency, which is reflected to a greater or less degree by all the pieces.

Perhaps the most important aspect of the finds is that this jewelry is all from a Parthian site, and from a datable level. That the Parthians were makers of jewelry has already been recognized, ${ }^{19}$ and the fact that few or no Parthian examples of reliable provenance exist greatly enhances the importance of the jewelry from Seleucia. There is, of course, the very great possibility that the two caches are not of Parthian origin, but imported. On the other hand the presence of so many Graeco-Roman parallels does not necessarily militate too strongly against the Parthian origin of the jewels, since they were discovered on the site of a city so much affected by Hellenism as was Seleucia. The final answer to the question awaits the results of future excavation.

[^34]PLATES XXIV-XXV


Fig. 1. Earrings of Cache I, Level II


Fig. 2. Set of jewelry of Cache II, Level II


Fig. 1. Microscopic photograph of bracelet

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## IV. NOTES ON THE EXCAVATION OF TEL UMAR

(Season 1931-32)

## By LEROY WATERMAN

TEL UMar is by far the most prominent mound of the Seleucia complex (see air photograph, Pl. XXVI, Fig. 1). It is an artificial hill which stands at the northeastern edge of the ruins about 52 feet above the surrounding plain (see contour plan of Tel Umar, Fig. 12).

For the purpose of determining its form and general structure, work was begun on the tel with a small force on December 8, 1931, and continued until January 25, 1932. The outer facing of the base of the mound, composed of unburnt bricks, was traced from southeast to northwest for approximately half of its circumference. The result gave the impression of a circular tower. The subsequent survey shows that the structure, if symmetrical, is elliptical and that it must have a major axis of 310 feet and a minor one of 260 feet (see air photograph, Pl. XXVI, Fig. 2).

The thickness of the outer wall, which was investigated at two points on the southern side, proved to be approximately 25 feet. The wall is not of uniform thickness, however, for on the northwest it extends inward for a distance of 60 feet. Its height is 20 feet. It is provided with a footing of the same material that projects 4 feet 10 inches beyond the face of the wall proper, and extends downward 8 feet 6 inches. Its outer face slopes with a slight batter of one to eight. See "late circular wall" in Section $A-B$ (Fig. 12). The footing rests upon a thin layer of potsherds. Five feet above the footing a band of earth 3 feet wide and $1 \frac{1}{2}$ feet thick now adheres to the face of the wall and marks the surface of the ground at a later time. This band was evidently added to protect from the destructive action of ground moisture the face of the wall immediately above the surface.

## TEL UMAR



SECTION A-B, LOOKING N.W.



Fig. 12. Contour map of Tel Umar

Within the inclosure made by this outer wall four different kinds of construction have been identified. For some distance inward from its inside surface, and of equal height with the wall, there is a filling of loose earth. A narrow trench cut through this filling from the southern face of the mound (see Pl. XXVI, Fig. 2) revealed the presence at the center of the mound of a solid tower of unburnt brick, 59 feet 4 inches square, whose top is only a few inches below the present summit of the tel.

Above the top of the outer inclosing wall there begins another form of construction, which consists of horizontal strata (now slightly tipped toward the center) of green sand varying in thickness from six to eighteen inches and separated from one another by layers of reeds (now partly decomposed) from one-half to one inch thick. These layers rise to a point about five feet below the top of the central tower, where the green sand is buried to a depth of three feet with clean red alluvium. This in turn is now covered with about two feet of mixed débris from later construction on the top of the tel.

A fourth form of construction inside the outer inclosing wall was located in the southeastern part of the mound. It consists of a solid mass of unburnt bricks. Its age, as well as its original size and shape, cannot at present be stated. One thing stands out clearly. Since the structure was cut at $a$ in the Section $A-B$ (Fig. 12) by the inclosing wall, it was no part of that construction, but represented an older building.

There seems to be little doubt that the inclosing wall and the square central tower were contemporaneous. They are both made of unburnt bricks 15 inches square and 4 inches thick and are strikingly alike in appearance. The dates of the various features thus far investigated cannot as yet be determined with precision, but potsherds, unmistakably Parthian, in the stratification of green sand do not allow that construction to be earlier than the Parthian period, 143 в.с.- 200 A.D.

A section of the inclosing wall excavated opposite $a$ (in Section A-B) was examined for sherds imbedded in the un-
burnt brick. A goodly number of these were recovered, and they also are clearly Parthian. Since, therefore, the central tower is contemporary with the inclosing wall, as already indicated, it seems evident that the entire structure in its present form belongs to the Parthian period, although the layers of green sand may well represent a late phase of the development.

Outside the inclosing wall at the southeastern point and partly built into the wall was a solid mastaba (platform) of burnt bricks laid in gypsum plaster measuring 24 feet ir length, 13 feet in width, and 5 feet in thickness, whose bast is 6 feet above the foundation of the inclosing wall. With this mastaba is connected a series of rooms of burnt-brick construction whose excavation has not yet been completed (see Fig. 12)

The other inner structure of unburnt bricks is older, as already seen, and this conclusion receives confirmation from the fact that the bricks are of a different size, viz. 14 inches square and 5 inches thick. Examples of these bricks may still be seen in situ in the eastern slope about 20 feet below the summit. More direct evidence of the age of this structure consists of a burnt brick found about 3 feet below the loose débris on its top and therefore its position is hardly accidental.

The brick bears a stamp with parts of two lines preserved. The last line yields, with a fair degree of certainty, "Mardukbalatsuiqbi king (or prince) of Karduniash" (see Pl. XXV, Fig. 2). We know that this ruler held sway in Babylon about 821 b.c. ${ }^{1}$ Whether or not the king himself directed the building operations, the evidence distinctly implies construction on the site in the Babylonian period. And any building project here which made use of the king's name would almost certainly involve the religious center of Opis and the older time. Other indications point in this direction, but their proof must await further excavation.

[^35]
(By Courtesy of the British Royal Air Force)
Fig. 1. Air photograph of Tel Umar from the northwest

(By Courtesy of the British Royal Air Force)
Fig. 2. Air photograph of Tel Umar from the south


[^0]:    ${ }^{1}$ Preliminary Report upon the Excavations at Tel Umar, Iraq, University of Michigan Press, 1931. Block B is trial trench No. 20. See Figure 1, p. 3.
    ${ }^{2}$ The dates in this article are based upon a study of coins and other inscriptional material from Seleucia by R. H. McDowell.

[^1]:    ${ }^{3}$ See plans of the great house in Merkes, R. Koldewey, The Excavations at BabyLon, p. 288, and of the palace at Nippur, American Journal of Archaeology, VIII (1904), 403 ff., and H. Hilprecht, Explorations in Bible Lands, p. 337.

[^2]:    ${ }^{4}$ Th. Wiegand und H. Schrader, Priene; cf. general plan of the excavations.

[^3]:    ${ }^{5}$ Cf. L. Woolley, The Sumerians, p. 156.

[^4]:    ${ }^{6}$ Another such door was found in Room 45 (Level II).

[^5]:    ${ }^{8}$ Ibid., p. 16.
    ${ }^{9}$ See page 18 , above.
    ${ }^{10}$ It should be noted here that this burnt suite of rooms was described in the first Preliminary Report, p. 20, as belonging to Level I, thus making the assumption of a conflagration fit the classic account of the burning of the city by Avidius Cassius in 164 a.d. Later excavation, however, has shown that this area belonged to Level II, which was destroyed during Trajan's invasion. This revision may show, contrary to the general belief, that Seleucia suffered less at the second Roman attack.

[^6]:    ${ }^{11}$ Tests made by Professor R. S. Swinton of the College of Engineering, University of Michigan, on cubes cut from unbaked bricks from Level II have shown an average strength of 123 pounds per square inch. The maximum stress developed in a circular arch made of unburnt bricks over Iwan 203, with a crown thickness of $21 / 2$ feet, would be about 25 pounds per square inch; if we adopt for it the proportions used at Hatra, where the crown height is one and one-half times as much as the span, the total load on the wells at the surface of the ground would be 50 pounds per square inch.

[^7]:    ${ }^{12}$ G. Rawlinson, The Sixth Oriental Monarchy, p. 371.

[^8]:    ${ }^{13}$ H. Schliemann, Tiryns, Plate II.
    ${ }^{14}$ Th. Wiegand und H. Schrader, Priene.
    ${ }^{15}$ R. Koldewey, The Excavations at Babylon, pp. 288 ff . To what extent Dr. Koldewey's generalization applies to older Babylonian buildings it is difficult to assert; but it is certainly true of the Neo-Babylonian period, and the arrangement must have been prevalent in Mesopotamia when the Greeks conquered it.
    ${ }^{16}$ Bertha C. Rider, The Greek House, pp. 237-238.
    ${ }^{17}$ American Journal of Archaeology, VII (1904), 403 ff ; IX (1905), 7 ff.
    ${ }^{18}$ H. Hilprecht, Exploration in Bible Lands, p. 337.

[^9]:    ${ }^{19}$ Howard C. Butler, Publications of the Princeton University Archaeological Expeditions to Syria, in 1904-1905 and 1909, II, Section A, 321 ff.
    ${ }^{20}$ Cf. Koldewey, op. cit., p. 288.

[^10]:    ${ }^{21}$ Gertrude L. Bell, Palace and Mosque at Ukhaidir, pp. 60 ff .

[^11]:    ${ }^{1}$ It is possible that traces of a similar custom may be found in the early Biblical period; cf. I Samuel, 25:1, and I Kings $2: 34$. In both cases the word bebêthô may mean simply "in his home town" or "his own grounds," and not necessarily "in his house" (literally). For such archaeological finds in pre-Jewish Palestine see P. Thompsen, Palästina und seine Kultur in fünf Jahrtausenden, pp. 51 ff.
    ${ }^{2} \mathrm{Ur}$, on the edge of the desert, began to bury in separate cemeteries, since untillable ground was abundant there; it was only later that it fell in line with the rest of the country, when the custom probably received the sanction of official religion.

[^12]:    ${ }^{3}$ According to S. Krauss, Talmudische Archäologie, II, 71, burial in the house was forbidden in late Jewish times (to insure religious and ceremonial purity), but he deals mainly with Palestinian customs. From the story of the magus, who tampered with Jewish graves (Bab. Talmud, Bâbâ Bathrâ, fol. 58), one might deduce that there were separate burial grounds outside the houses.

[^13]:    ${ }^{4}$ The fragments of plaster and charcoal found in large amounts in the majority of the graves belonging to Levels I and II must have been placed there as some sort of disinfectant (see also below, p. 45). In one case (grave 110) the lower skeleton (No. 2) was wholly covered by a thin sheet of lime plaster, and the upper skeleton (No. 1) was laid on top of this sheet. In another instance (vault 216, skeleton 7) a body was placed along the north wall of the vault on a layer of plaster $2 \mathrm{I} / 2 \mathrm{~cm}$. thick, which in its turn rested on a layer of earth 4 cm . thick, spread over the burnt-brick pavement of the vault.
    ${ }^{5}$ Some vaulted family tombs were found by the German expedition in western Ctesiphon. Since no final publication of the materials has as yet appeared, it is impossible to know to what period these vaults belong. However, as the capital of the country, Ctesiphon was a rich town where people could afford such costly outlay at a time when in Seleucia there might no longer have been any people of comparable wealth.
    ${ }^{6}$ It is not quite certain to which level (I or II) graves 111 and 123 containing drab pottery coffins belong. It is possible that both are to be assigned to Level II. In this case the number of graves of this level, which contain burials in coffins, would reach eighteen.

[^14]:    ${ }^{7}$ Thus, in street 36, grave 129 (Level II) ; strect 227, graves 127 (Levels II and III) and 139 (Level II) ; street 32, grave 176 (Level III).
    ${ }^{8}$ Of the vaults uncovered so far, the openings are as follows: No. 2 (Level II or III) and No. 131 (Level II), and probably No. 40 (Level III), to the north; Nos. 41 (Level II) and 155 (Level III), to the west; Nos. 90 (Level II), 159 (Level II), and 216 (Level III), to the east. It is just possible that the original entrance of vault 90 was also on the north side, whereas the present entrance on the east is secondary.

[^15]:    ${ }^{9}$ See Table I, showing a comparative list of orientations (heads and faces) according to levels. In this table, as well as in all following statistical computations, only graves inside Block B have been taken into consideration. Records of other graves (in Blocks $\mathrm{A}, \mathrm{C}$, and D as well as in various trial trenches in different parts of the site) have not been included.

    An exhaustive series of tables has been prepared in which the graves have been classified according to manner of interment. The data on graves opened from 1929 to 1932 inclusive give their number, provenance, plan, orientation of remains, with sex and age, and also a complete list of objects found in them. It is hoped that these tables may appear in the final publication.

[^16]:    ${ }^{10}$ This is the average assumed for a Hellenistic house at Priene (for a discussion of the problem see Th. Wiegand and H. Schrader, Priene, Chap. II). I assumed a similar average for the rustic house at Karanis (Fayyûm), though, according to Professor A. E. R. Boak (report of a lecture delivered in Cairo, Egyptian Gazette of April 1, 1932), there are papyrological statements to the effect that as many as twenty persons sometimes occupied one of these houses; however, we both arrived independently at the same estimate of the total city population $(20,000)$. This estimate would hold good for Seleucia as well, always taking it for granted that the buildings in Block B were more than one story high.
    ${ }^{11}$ Of course, this estimate would not hold good for every block in the town. Pliny ( $\mathrm{v} 1,122$ ) states that the town had a population of some 600,000 , who could not possibly have lived in the town if every block had only about 100 inhabitants (the city contains about 200 blocks-apart from empty areas, theaters, naval basin, etc., many of which must contain public buildings not to be considered for residential purposes). Consequently, the majority of the blocks must have been overcrowded worse than present-day slum areas, even if one takes Pliny's statement cum grano salis.

    It may be interesting to note that a century later Dio Cassius (lxxi) states that the population of the city at the time of its sack by Avidius Cassius was 300,000; this is another confirmation of the economic decline deduced elsewhere on purely archaeological evidence.
    ${ }^{12}$ There was not much material available here for comparison, apart from the fact that modern conditions even in crowded cities would be superior to those of ancient Seleucia. For approximate comparison it might be of interest to state that

[^17]:    the average death rate at Madras, India (a large Oriental town, which would probably come nearest to the conditions prevailing in ancient Seleucia), was 40.3 per 1000 in the year 1887. This average, of course, includes slum areas, to which Block B obviously does not belong. On the other hand, the death rate at Bombay (for the same year), with its vastly superior sanitary and social conditions, was only 26.3 per 1000, which is not very much more than the figure arrived at here.
    ${ }^{13}$ If the areas of the larger courtyards, and especially the very large service court occupying almost the whole north portion of the block, are deducted from the total acreage of the block, approximately the same result would be obtained by calculations on the area basis. This reduction of the population corresponds to what has been already stated above on the economic decline of the city during the period of Level I. See also note 11 .
    ${ }^{14}$ Infant mortality is not calculated, since notice of infant burials was not taken during the first season of excavation in Block B (1929-30).
    ${ }^{15}$ No statistics of Level III are given, for two reasons: (1) The excavation of this level has not been fully completed (since no walls have been removed) ; (2) It seems that the death rate was greatly increased by accidental causes toward the end of the period (see below, p. 59). Furthermore, the time limit a quo of the occupations of this level has not yet been as definitely fixed as those of Levels I and II.

[^18]:    ${ }^{16}$ For toys from a child's grave (in Roman Egypt) see Sir Flinders Petrie, Objects of Daily Use, p. 61, and references given there.
    ${ }^{17}$ All burials where the coins were found on or near the pelvis really mean that

[^19]:    they were originally placed in the hand; hands (or at least one hand) were usually resting on the pelvis; with the decay of the body the coin would slip out between the finger bones.
    ${ }^{18}$ Even in some of these examples the coins may have been originally placed in the hands, for the arm bones of several skeletons were found folded at the elbows across the chest.
    ${ }^{19}$ Two more bronze keys of the usual type (see Pl. XXI, Fig. 1) were found in vault No. 2 (T.T. 18, Levels II or III). They have not been taken into consideration in the text, since the vault lies outside Block B.
    ${ }^{20}$ Though Petrie's volume Amulets is devoted to Egyptian amulets, several amulets discussed there are common to the whole ancient world (east and west Mediterranean sphere), so that many Seleucian amulets are portrayed in that volume (e.g. type 84, Hathor's disk and horns; type 123, model of stone axe ?; type 19, the fly, and

[^20]:    others). The key, however, is not to be found in this volume, nor-so far as I knowdoes it appear anywhere else in the ancient Near East. There is, though, one exception in late Jewish lore. Bab. Talmud, Tractat Semahôt, Chap. VIII, contains the following passage: "One hangs up the key of the deceased and his pinqas [a notebook, diary, account-book] in his coffin because of grief [the text does not explain whether it is the dead man's grief over the loss of his earthly possessions, or some sort of symbol of the grief felt by the deceased's family]; when Samuel Minor [a well-known Rabbi of the third century a.d., one of the founders of the Babylonian seats of learning] died, they hung his key and his pinqas in his coffin; and Rabbi Gamaliel together with Rabbi Eliezer were lamenting him and saying: he is worthy of being bewailed and mourned after, for kings die and leave their crowns to their sons, rich people die and leave their riches to their sons, but Samuel Minor took all the good things of this world [he was famous as a great scholar, and a modest and kind man] and departed." The two parts of the quotation given above suggest two different reasons for the custom of hanging the key in the deceased's coffin; obviously this was an old survival, the original meaning of which was lost. I owe this reference to the kindness of Dr. B. Meisler of the Jewish Exploration Society.
    ${ }^{21}$ This is true frequently in ancient cemeteries in Egypt. Thus, at Qau-el-Kebir in an Old Kingdom cemetery all undisturbed graves contained nothing but common pottery, whereas several objects were recovered from anciently plundered graves, in which the thieves in their haste had overlooked many articles of value.

[^21]:    ${ }^{22}$ The skeleton is now in the museum of Waynesburgh College, Pennsylvania.
    ${ }^{23}$ See Bab. Talmud, Tamîd, fol. 32, or Midrâsh Tanhûmâ, Section Emôr.

[^22]:    ${ }^{24}$ Similar mutilations were noticed in two more cases. In grave 105 (Level II) the left half of the pelvis and all bones of the left leg of skeleton 2 (adult F) were missing, the left upper arm bone was broken, and the lower arm and finger bones were lacking, whereas the lower leg bones of the right leg were not in situ. This tomb contained three skeletons-one above and one below skeleton 2 ; the other two skeletons were whole and seemingly undisturbed. In grave 156 (see below, p. 59) there were wanting the left half of the pelvis and all bones of the left leg of skeleton 13 (adult $\mathbf{F}$ ) ; these, however, may have been moved out of place by later burials.

[^23]:    ${ }^{25}$ One of these tubular perforations still contains a fragment of the thin bronze wire which was undoubtedly used in stringing these beads.

    Here may be noted what was observed in several cases, namely, that the ancients used wire (preferably bronze) for stringing their necklaces, armlets, etc. The reason probably was twofold: metal wire was stronger than threads or strings of similar thickness; and polished bronze wire-where showing between the beads-would shine like gold, enhancing the value of the necklace.
    ${ }^{26}$ The terminology used here for the shapes of beads is that accepted by the conference of the heads of archaeological expeditions in Iraq, February, 1932, except for shapes not discussed at the conference.

[^24]:    ${ }^{27}$ A similar coin was recovered from one of the rooms of Block B also.

[^25]:    ${ }^{25}$ See p. 1, and cf. Encycl. Brit., 11th ed., XXI, 218, col. 2.

[^26]:    ${ }^{29}$ With the exception of graves 164 (see Pl. XXII, Fig. 2) and 206, which were merely heaps of bones piled up promiscuously and which, in view of the number of skulls, must have contained remains of numerous bodies. These make the impression of secondary burials, which may have been unearthed during building operations in the area of Block B, and have been put away in common graves. Burials in the streets (see note 7) may be due to the same cause.

[^27]:    ${ }^{1}$ In this article the word "Parthian" refers to the general culture of the time in the lands over which the Parthians were the dominant political power. It will be necessary to await excavation in Parthia proper before we may accurately indicate what is distinctively Parthian.
    ${ }^{2}$ Or possibly malachite. This stone has been subjected to decomposition and has been considerably altered.
    ${ }^{3}$ An examination of all the gem stones mentioned here was made by Dr. Chester B. Slawson of the Department of Mineralogy of the University of Michigan.

[^28]:    ${ }^{4}$ Reproductions of these two caches appeared in color in the Illustrated London News, 180 (Feb. 13, 1932), Plate I, facing p. 246.

[^29]:    ${ }^{5}$ Although no chemical analysis of the gold has been made, such a wearing away of the metal would indicate its softness. This is a property of gold in its purer form and would not be so apparent if the metal had been alloyed.

[^30]:    ${ }^{6}$ Pearls from Graeco-Roman times are shown by C. R. Williams, Gold and Silver Jewelry and Related Objects (New York, 1924), Pl. XVI, 56; E. Vernier, Bijoux et orfevreries, Vol. 48 of the Catalogue général des antiquités égyptiennes du Musée du Caire, Pl. XXX, 52.439, Pl. XXXV, 52.511; M. Rostovtzeff, Iranians and Greeks in South Russia (Oxford, 1922), Pl. XXVI, 1. See also the index of stones, pastes, enamels, etc., on Pp. 393-394 of F. H. Marshall, Catalogue of the Jewellery, Greek, Etruscan, and Roman, in the British Museum (London, 1911). Here under "pearls" are noted examples from sites all over the Mediterranean area.
    ${ }^{7}$ Cf. Encyclopaedia Brit.mnica, 14th edition, Vol. 17, p. 421, article on "Pearl."
    ${ }^{8}$ Cf. Marshall, op. cit., Pl. LV, 2652, 2659, and 2660; also E. H. Minns, Scythians and Greeks (Cambridge, 1913), Fig. 290, 20, and Fig. 297. These examples are variations of the type which Marshall calls "disk and pendant," and have pendants made of coils of wire.
    ${ }^{9}$ Cf. K. Hadaczek, Der Ohrschmuck der Griechen und Etrusker (Wien, 1903).

[^31]:    ${ }^{10}$ Cf. A. Furtwängler, Die Antiken Gemmen (Leipzig and Berlin, 1900), Vol. 2, p. 145 , numbers $55,57,59,60,61$. These are referred to as of Graeco-Roman times.
    ${ }^{11}$ Cf. E. Herzfeld, Paikuli (Berlin, 1924), p. 4, Fig. 3, and F. Cumont, Fouilles de Doura-Europos (Paris, 1926), Pl. XCI, Fig. 5.

[^32]:    ${ }^{12}$ Cf. Williams, op. cit., Pls. III and XXXVIII, 2e.
    ${ }^{13}$ The amphora seems to have been quite common in jewelry of the GraecoRoman period; cf. Marshall, op. cit., p. xliii, and Pl. LI; Hadaczek, op. cit., Figs, 56, 57; Minns, op. cit., Figs. 290, 294, 296; C. Alexander, Jewelry (Metropolitan Museum of Art, New York, 1928), Fig. 56.
    ${ }^{14}$ Op. cit., p. liii.
    ${ }^{15} \mathrm{Ibid}$. on "pomegranates," and especially Pl. XI.
    ${ }^{16}$ Ibid., Pl. LV, 2668.

[^33]:    ${ }^{17}$ A reproduction of this technique is given by Williams, op. cit., Pl. XXXVIII, $69 \mathrm{~b}-\mathrm{f}$.

[^34]:    ${ }^{18}$ Cf. Rostovtzeff, op. cit., p. 133; also Marshall, op. cit., pp. l-li.
    ${ }^{19}$ M. Rostovtzeff, Social and Economic History of the Roman Empire (Oxford, 1926), p. 512, n. 15; also F. Cumont, op. cit., p. 65.

[^35]:    ${ }^{1}$ See A. T. Olmstead, History of Assyria, p. 156.

