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George T. Scanlon

Fustat Expedition Preliminary Report. Back to Fustat-A 1973 [avec 4 plans et 8 planches].

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# FUSTAT EXPEDITION PRELIMINARY REPORT :

## BACK TO FUSTAT-A 1973\*

George T. SCANLON

It had been our purpose in 1972 to return to Fustat-A to re-clear and re-plan what had been uncovered in 1964 and to complete the route of the aqueduct through that part of the ARCE concession. Because of staff exigencies, we could not carry out this part of the program; however, sufficient funds remained to permit us to accomplish our task in a short season in 1973 <sup>(1)</sup>.

The season lasted from 4 September to 4 October 1973, with an additional fortnight of recording and photographing. Twenty eight days of field work were accomplished with the aid of a work force varying between twenty-five and ninety and the following staff : Dr. George Scanlon, Director; Dr. Wladyslaw Kubiak, Associate Director; Mr. Antoni Ostrasz, Architect; Mrs. Laylah Shahin, Field Archaeologist; Miss Clara Sampson, Artist; Mrs. Elizabeth Rodenbeck, Ceramics Supervisor; and Mr. Thierry Bianquis, Photographer. Mr. Abd al-Hafiz Diab was our Inspector, and *ra'is* Kamil Sharit supervised the work-force.

To our dual purpose of reinvestigating the area uncovered in 1964 and completing the route of the aqueduct in Fustat-A, we added a third : a stratigraphical

<sup>(1)</sup> The extension of the budget balance from 1972 to 1973 was made possible by the Foreign Currency Program of the Smithsonian Institution. The Expedition had been advised that no further funding was contemplated; hence the pressure to return to Fustat-A to look again at what we had uncovered nine years previously. As the Egyptian Antiquities Service, under the able direction of Mr. Abd al-Rahman Abd al-Tawwab, had uncovered more of our aqueduct to the north of Fustat-A and east of Fustat-B, it was incumbent upon

us to see how much more of this unique device survived in Fustat-A.

A hard currency subvention was received in the name of the Museum of Far Eastern Antiquities, Stockholm; neither it nor the Smithsonian is responsible for the opinions expressed in this Report.

A list of abbreviations has been appended to the Report for ease of reference. Material relevant to Fustat-A can be found in the following : FEPR '64, Ancillary, Fat. Fil., Re-dating, Pits, and Domestic Arch.

analysis of the high mound at the point where Fustat-A attends the edge of Bahgat's excavations in this particular area of the overall site <sup>(1)</sup>. We were anxious to discover whether the mound was a true accumulation or disturbed throughout, as we proved in our investigation of certain mounds in Fustat-B <sup>(2)</sup>.

#### A. — THE EXCAVATED AREA RE-PLANNED.

When one observes Plan II in FEPR '64, one encounters a greater obscurity of plan than one had thought possible from the perusal of the « imaginative » plans suggested in *Fouilles*, where the jump from *plan de l'état actuel* to *plan restauré* rarely seems fully justified. Compared to Fustat-B, Fustat-A is low-lying and has a very high water-table, which in 1964 prevented the full plumbing of most of the pits <sup>(3)</sup>. It also prevented any more than superficial clearing because of the accumulated mud. By 1973 this had hardened somewhat, and by careful scraping, a clearer outline of the domicile at the eastern end emerged.

Perhaps the most important defining aspect is the evidence of a long wall running parallel, relative to the intervening street, to the aqueduct, i.e., from VIII-9 west to VII-19. Thus it became clear that the impasse posited in 1964 as running almost N-S through VIII-6/11/16 is impossible, and that the impasse clearly runs N-S through VI-5/10/15/20. (Compare FEPR '64, Plan II and Plan II herein). In essence, one has a much more distinct domiciliar reality east of the true impasse than was obvious in 1964.

<sup>(1)</sup> Cf. FEPR '64, plan I and pl. I-1; *Fouilles*, fig. 3, the point being due east of the northernmost revealed street; and Plan I herein where it can be seen in sector XIX.

<sup>(2)</sup> Cf. Shard Count '68.

<sup>(3)</sup> FEPR '64, pl. VII-15 where water can be seen in what is room N (VIII-3) of Plan II herein; and pl. IX-21 which is the canal leading into Pit I (VIII-12). Then there was the noisome «lake» fronting the fertilizer plant in sector IV in Plan I herein. By 1978

all of the eastern section of the cleared area was under water and by 1980 only the tops of the masonry remains west of the impasse could be seen. By using a measuring rod, we found that the depth of the water-hold U (VII-14) was 2.5 m., with water in the lower 60 cm. By 1980 only the top of the wall to the west could be ascertained, a rise of between 3.0 and 3.5 m. in seven years; cf. Section a-a in Plan III herein.

## 1. ENSEMBLE(S) EAST OF IMPASSE.

This particular ensemble-domicile had three courtyards : A in VIII-8 with a lovely basin A', already visible in 1964, with a shrubby pit A'' which was not drawn on the plan (Fig. 1)<sup>(1)</sup>; the second at R (VIII-2); and the now apparent

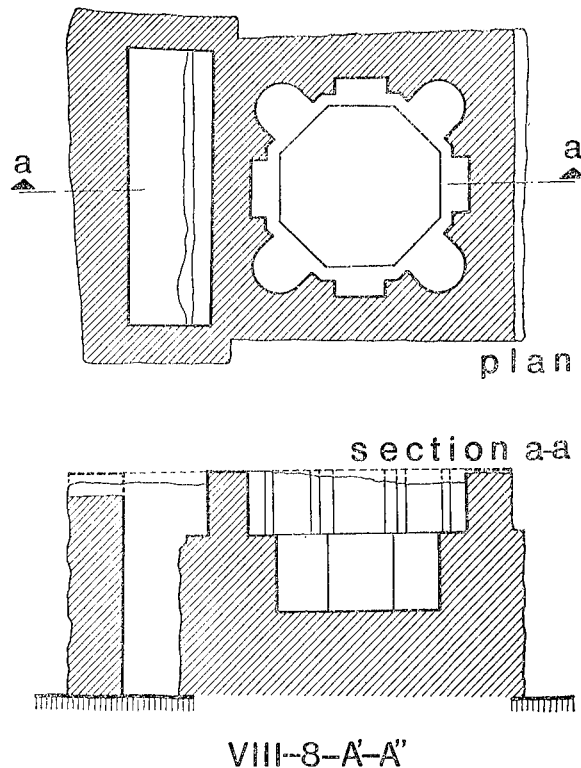


Fig. 1. — Plan and section of basin A' and shrubby pit A'' in courtyard A (VIII-8). Depth of basin 1.0 m.

one at H (VIII-11), attendant to the street, but, unlike the other two, without a basin. It lacks, too, any trace of stone paving laid in the herring-bone pattern, so indicative of the Fatimid builder of which there are many remnants in the other

<sup>(1)</sup> It is a smaller version of basin A' (VII-4), which had been covered in a later period; cf. FEPR '64, pls. XIV-36 and XV-38. A

comparable example was found in Fustat-B in 1965, cf. FEPR '65-II, pl. V-b; and others are to be seen in *Fouilles*, figs. 52 and 53.

two courtyards<sup>(1)</sup>. Indeed it had two rather large irregular gougings into the *ğabal*; none of its fill was *in situ* (Pl. XXIX, A). However, sufficient traces of foundation courses survived the subsequent devastation to allow a resemblance to the classic Samarrā-*bayt* pattern. Rooms D-E-F attend to the north without an intervalent portico, which however appears *behind* them at G (VIII-6). This in turn fronts three small rooms C'-C'C'', and behind these was an indefinitely shaped room H containing the sump-pit H', which clearly indicates a latrine. H' was *en système* with the large pit J which was cleaned from the impasse. To the east of courtyard H was a large trapezoidal room K (VIII-12), beneath which ran the canal running to pit I which was cleaned from the street. On the western side of courtyard H there appeared the faint outlines of two rooms : a small rectangular one A (VIII-16) and a larger one B (VIII-11) with an alcove on its north side. As very little of this was obvious in 1964, the revelation of this ensemble with its novelties justified in great part the move back to Fustat-A.

The configurations around the other two courtyards are only slightly clearer than they were in 1964. If the basin A' may be taken as the rough center of courtyard A with a reasonable alignment relative to the sides, and that the wall trace between G and L (VIII-12/13) is the western limit of the courtyard, then A was app.  $9.25 \times 11$  m. It was directly adjacent to the street to the south, bounded by porticoes L and L' to east and west, and impossible to give a northern limit on this season's archaeological evidence. (Rooms O and P in VIII-7 can barely be elucidated, and the southern wall of the latter is diorientated). Did the usual Samarrā-*bayt* obtain behind the porticoes? To the east beyond L' it is impossible to say; to the west only one room, J in VIII-a2, is discernible (Pl. XXIX, B, where the height of its fill may be taken as level with the herring-bone plaquing remaining in courtyard A). Withal, courtyard A must have been imposing, if slightly asymmetrical; and unusual in that it was directly adjacent to the street<sup>(2)</sup>.

Courtyard R is equally difficult to discern, except that we now can posit a secure eastern wall and suggest the possibility of a northern one. As can be seen from Plan II herein and FEPR '64, pl. V-11, there is very little space which divides

(1) Cf. Reconsiderations, pp. 417 ff.

(2) Another example is Maison V in *Fouilles*, figs. 19 and 20. Two others, slightly smaller,

were discovered in Fustat-B, and are discussed fully in *Domestic Arch.*, houses 7 and 10-C.

it from courtyard A; indeed they appear almost continuous. Further, the octagonal base of its basin, hewn in the *ğabal* (Pl. XXIX, C) is the same size that of A' in courtyard A (see Fig. 1). It is practically impossible to give the dimensions of the courtyard as a whole, or to distinguish its relationship to the herring-bone paved area T (VIII-2).

On the west side of R are the clear remains (generally mortar lines on the *ğabal*) of three rooms U-Y-B (VIII-1/6), all differently shaped and the last seeming to have as much structural relevance to courtyard A as to R. The remains of the flooring are laid in no determinate pattern, and lie much lower than the herring-bone pavement remnants in courtyard A, for which see section a-a in Plan III. This would prove an earlier occupation, as do the intrusive wall traces in room U, as well as earlier paving traces found there also <sup>(1)</sup>. This irregularity of the rooms of the *bayt* and the odd-shape of the courtyard as compared to that of A are not anomalous to this particular domicile; a comparable situation obtained in Fustat-B, first analyzed in FEPR '65-II, Plan II and later by Ostrasz in *Domestic Arch.*, as his house 15. There can be little doubt that in the 11th century, 9-10th century elements were incorporated and the entire domicile planned within the area, which meant a certain lack of symmetry, or even of ground-plan sense (rooms V and W (VIII-1) are witness to this process) in certain portions of the ensemble. Thus courtyards A and H seem straightforward, whereas R seems to be rather like B (XXVI-13) in the house first seen in 1965 and completed in 1966, cf. FEPR '66, Plan III <sup>(2)</sup>.

<sup>(1)</sup> Cf. FEPR '64, pl. VI-13, where the intrusive walls can be seen at top center. The two periods were confirmed when a portion of the paving at T (VIII-2) was removed. Below the herring-bone Fatimid paving was proof of 11th century occupancy, particularly fragments of imitation S'ung porcelain, and the presence of an earlier paving, relative to earlier occupancy can be seen in FEPR '64, pl. III-6, 7 and 8. Yet earlier occupancy, ca. late 7th-8th centuries, can be deduced from the traces of baked brick laid in mud

mortar; cf. Re-considerations and Numismatics, particularly pl. 2 in latter.

<sup>(2)</sup> Still further examples of Fustat courtyards and *bayts* fitted-in rather than given planned symmetry can be seen in *Fouilles*, Cour D in Maison I and Cour B in Maison VI. Another solution can be seen in the courtyard of House 6 (*Domestic Arch.*), excavated in 1968 in Fustat-B, which we are certain is of the 9-10 century, since it represented a *harāb* in Fatimid period; cf. FEPR '68-I, p. 82.

To the east of the courtyard, rooms N and K (VIII-3), though uncovered in 1964, now have a more definite relationship to the domicile as a whole. (Because of double-walling, they would seem unconnected with rooms X and Y in the same quadrant). Room N probably opened on R, but room K would seem to be independent of both. However K is important in that it contained clear recessing in its south wall, a rubric we had heretofore related to porticoes and liwans, wherein the recessing (a Fatimid refinement) would no doubt carry a stucco dado <sup>(1)</sup>.

## 2. ENSEMBLE(S) WEST OF THE IMPASSE.

Once again we must compare Plan II of FEPR '64 with Plan II herein. It is now certain that the impasse necessary to service pits D' (VII-15/VIII-11), C (VII-15), W (VII-10), J (VII-10/VIII-6), B' and A' (VII-5) is more correctly positioned in the latter plan <sup>(2)</sup>. Secondly, when we removed the great mounds of clay revealed in quadrants VII-12/13/17 in 1964 <sup>(3)</sup>, further definite domiciliar elements appeared. It is now obvious that the clay was brought here after the abandonment of the area, i.e., it represents part of the quixotic industrialization which took place amid the ruins of Fustat during the late 13th and 14th centuries <sup>(4)</sup>.

<sup>(1)</sup> For room K, cf. FEPR '64, pl. VII-15. A very good example of recessing in a *salle* can be seen thirty-five meters to the west at C in VII-10. This question of a Fatimid rubric is fully discussed in Reconsiderations, p. 417.

<sup>(2)</sup> Though we would prefer to see distinct ensembles on either side of this impasse, we are confronted by the fact that pit D' is fed by a canal running *across* the impasse which is in turn servicing as efflux for a flue built into the thickened wall of the western ensemble, whereas a second flue in the same wall feeds into pit C, which is serviced on the proper side. The same situation obtained at the bend of street no. 5 in 1968; cf. FEPR '68, p. 88, pl. XXIX and Plan I. The same can be seen in Bahgat's Maison I where a canal

going under and across the impasse would seem to connect the ensembles; cf. *Fouilles*, fig. 4. On the analogy of the latter, our ensembles would seem to be combined into a rather large domicile, like that of Maison I, which contained three courtyards and possibly an *atrium*. Ostrasz, somewhat capriciously, breaks up Maison I into four units and draws Bahgat's *atrium* quite differently. In our specific case, one could argue that pit D' and its canal represents an earlier reality, suppressed when the impasse was constructed and replaced by pit C and its flue.

<sup>(3)</sup> Cf. FEPR '64, pls. IX-23 and XI-28, where the mounds can be seen to the right.

<sup>(4)</sup> Further evidence would be the remnants of glass kilns at M and N in VII-15/20, cf. FEPR '64, pl. X-25 (where they are mis-

What was roughly clear in 1964 is now quite obvious, *viz.*, that we have a superb Samarrā-*bayt* unit, one centering around a courtyard, app.  $8.25 \times 6.25$  m., which later contained the glass kilns M and N. There was a three-arched entrance to the portico P-O-Q (VII-14/19), which itself had wall-recesses and was longer than the frontage of the three rooms (R-S-T) it serviced <sup>(1)</sup>. What remains of the T-shaped portico/iwan is most excellently paved with stone plaquing in the herring-bone pattern.

To the north of the courtyard only two rooms are certain : what might be considered a small recessed iwan (L in VII-15), and what could be a latrine at K (VII-14) <sup>(2)</sup>. Nothing definite can be discerned to the south, while the east side was simply a wall bordering the impasse.

But what of the space which lay between this particular ensemble and that centering around courtyard A (VII-4) to the north? We know from the 1964 excavation that there were two very fine brick-lined and plastered water-holds, now denominated U and V, with adjacent rooms O and P to the north (VII-9/14). The area fronting V and P was too difficult to excavate fully in 1964, both because of the seepage and the weakness of the walls immediately to the north <sup>(3)</sup>. All of this fill was removed (having dried), and a set of rooms F-F'-D' could be posited from mortar traces on the *ğabal*, as well as a deeply hewn canalization system

taken for bins for glass ingots). Other traces have been found in Fustat-B in 1965, 1968 and 1972, for which see the relevant Preliminary Reports. Two aspects relate all the examples : all had sides composed of stone bricks or plaques, and all were built through the ruins irrespective of earlier masonry orientation.

<sup>(1)</sup> A similar case might be argued for the portico in Bahgat-s Maison III, cf. *Fouilles*, fig. 14. However, our portico is not symmetrical : Q is deeper than P. As can be seen from Section b-b (Plate XXXI), the *bayt* was reared quite high above the *ğabal*, which leads to the conclusion that pits I and R (VII-20) must have belonged to an earlier

habitation and were effectively estopped when the new ensemble was laid out in the Fatimid period.

<sup>(2)</sup> As there was a canal under the flooring at K which serviced a flue in the adjacent wall, a toilet facility was adduced. Though it is rare for such an amenity to be gained from the courtyard, we found the same situation obtaining in a domicile discovered in 1965, though the actual latrine was reached at a bend from the route leading off the courtyard, cf. FEPR '65, Plan II (U in XXXI-19), pl. X-d Ostrasz posits another at Q behind P in VII-19, cf. *Domestic Arch.*, house 20.

<sup>(3)</sup> Cf. FEPR '64, pl. IV-19 and section B-B on p. 14 where the fill can be seen.

connecting pits Z and Y with W, related to the impasse. (Pl. XXIX, D). As the remains of a set of stone steps (D in VII-15) are built relative to the thickened wall which contains a flue giving into pit C, which steps are all part of the ensemble under discussion, it would seem that these new elements must be part of the same domicile. Also the traces of paving, apparent in pl. IV-9 in FEPR '64, and noticeable in Plan II therein, were plaques laid in the familiar style, and originally at the same height as the paving at P-O-Q-S to the south. Finally, the quality of the water-holds (U and V in VII-14) would relate them to either of the ensembles adjoining them, if not actually to connect them <sup>(1)</sup>.

We must now consider those newer portions which appeared under and attendant to the mounds of clay uncovered in 1964. Some traces of double walling running N-S in quadrant VI-19 were ascertained then, as well as the general outlines of a room behind that containing the water-hold U (VII-14) which because of the odd shape of the pit system X'-X (VII-13), we assumed to be part of the supposed pottery centering around courtyard A in VII-2/3/7/8 <sup>(2)</sup>. The double walling is now quite obvious, revealing one complete room U and portions of two others U' and W (VII-18/19); while beneath the clay deposits a complex set of rooms S-I-C-D (VII-12/13/17/18) became apparent. There can be little doubt now that the pottery which required this clay must have been constructed after the abandonment of the habitation containing all these rooms, hence after 1168.

A novel feature of Fustat building practices can be seen at C (VII-17): a flooring of roughly dressed blocks of stone, not unlike smooth cobble-work or Belgian blocks. As these covered an earlier flooring and were higher than the paved remnants of C' (Pl. XXX, A), one must surmise two dating periods, but the latter one, that of the stone blacks at C, must be anterior to that of the clay mounds which covered the area.

The date of the ensemble centering on courtyard M' (VII-15/20) was established by making a stratigraphical cut under the herringbone bone pavement at O (VII-14).

<sup>(1)</sup> Thus, by ignoring these water-holds, Ostrasz is perhaps misleading in his analysis of the actual dimensions of houses 19 and 20. Neither they nor rooms F-F'-D' can be looked upon as independent of either or both ensembles.

<sup>(2)</sup> Pits X'-X do not appear in Plan II, FEPR '64, but can be seen in pl. X-26 therein. For a discussion of the pottery, *ibid.*, pp. 18 ff. On the earlier plan it was decided to show the extent of the cache of clay, part of which was removed to reveal X'-X.

In the upper layers there was abundant evidence of 11th century Fatimid occupancy, particularly FFS shards and typical filters; below this came typical 9-10th century evidence, whilst at the very bottom both the absence of any glazed materials and the presence of mud mortared baked brick wall traces indicated the very earliest, late 7th-8th century, occupancy <sup>(1)</sup> (Pl. XXX, B). Very early lead-glazed pottery was found in the lowest fill of P (VII-19) as well as mud mortared bricks. An Arab imitation *dodecanummia* was also found in the muddy lowest fill of portico O, just over the divide. As comparable traces of mud mortared bricks were revealed in U-W-I-S (VII-13/18/19), the earliest stage of Fustat occupancy may be assumed for this area as well.

### 3. ENSEMBLE(S) TO THE NW OR IMPASSE.

These ensembles center around courtyards A (VII-4) and A'' (VII-VII-3/8). Their general definitions were quite clear in 1964; the cleaning of the caked mud this season simply added a sharper clarity of ground plan to the various elements. The yard at A (VII-4) may now be understood to be as elegant as that around courtyard M' (VII-15/20), possibly even more symmetrical. To the north of the beautiful basin A' lay a porticoed *bayt*, entered through free standing arches, as at courtyard M'. The central iwan F (III-24/VII-4) forms a continuous T-shape with the portico. Attendant rooms F' and F'' are interestingly different : the former entered from the portico and the iwan, the latter from the iwan only. On the basis of herring-bone paving traces, both rooms proceeded behind the iwan <sup>(2)</sup>. To the west there is the finely paved and recessed room K flanked by the narrow K' and the more spacious J (all in VII-4/9), which contained latrines giving onto a sump J' and a canalization which has its egress in the large pit at G'

<sup>(1)</sup> The arguments for these dating *dicta* have been presented cumulatively, particularly where stratigraphical cuts have been made, which can be found in the Preliminary Reports of 1966, '68, '71 and '72. Other arguments and nomenclature will be found in Ancillary, Pits, Fat. Fil., Re-dating, Recon-siderations, Egypt-China and Fatimid-Saljuq.

For the earliest dating criteria our arguments are most fully set forth in Numismatics.

<sup>(2)</sup> The two other examples of these « bënt » rooms involved latrines : *Fouilles*, Maison VII H in fig. 27, and FEPR '65-II, Plan II, U and Z in XXXI-18/19, pl. X b and d. As there is no canalization apparent beneath F' and F'', it cannot be the case here.

(VII-2)<sup>(1)</sup>. To the south there is the beautifully recessed and paved room C, possibly the most intricately designed element uncovered to date in the ARCE concession and one no doubt which carried a carved stucco dado and revetments; flanking it are the oddly shaped rooms H and G, the latter containing what would appear to be the three parallel latrines, angled behind the north recessing of C : all in VII-9/10.

To the east of courtyard A only rooms C and D may be assumed with minimal certainty, while another at E (all in VII-5) must have completed the *bayt*. This leaves rooms M and K behind D-C-E bounding the impasse to the north. As there is no double-walling visible and as K contained paving as fine as that obtaining in F (III-24/VII-4) and C (VII-9/10), we could assume these rooms to be part of the ensemble centered around courtyard A. Conversely the canal under K, with its egress at pit A (VII-5), which was serviced from the impasse, has its origin in the ensemble around courtyard R (VIII-1/2) to the east. Were these ensembles conjoint parts of the same large domicile? The newly cleaned situation forces us towards a positive surmise.

The ensemble centering around courtyard A'' (VII-3/8) presents us with an almost total anomaly in the archaeology of Fustat, in that it was possibly porticoed on all four sides, or had at the very least a walk-way on all four sides from which one entered the various units. In the latter sense it could be construed as an *atrium* for which we lack traces of columns or pillars<sup>(2)</sup>. On the north side four rooms were entered from the walk-way and a fifth entered from the latter by a narrow corridor : F-G-H-K-M in VII-2/3 and III-23. The last three of these were distinguished by having flooring fill made of unglazed two-handled bulbous vessels placed upside down and covered by stone plaquing<sup>(3)</sup>. On the south side are four rooms accessible from the walk-way : I-D-N-L in VII-8/9. To the west a more usual type of portico E (VII-2/7) appears in outline with traces of an oddly orientated room B (VII-7).

<sup>(1)</sup> The latter may be seen in FEPR '64, pl. VII-17.

<sup>(2)</sup> An example of the pillared *atrium* can be seen in FEPR '65-I, Plan IV, where it is P in XVI-6. Bahgat had one in the ensemble attending his Maison I, but pays it scant

attention : *Fouilles*, figs. 4 and 5.

<sup>(3)</sup> Cf. FEPR '64, pls. XII-30 and 31 which are rooms H and K, and VII-17 showing room H cleared of its vessels and the northern bounding wall of G. For an analysis of this phenomenon : cf. *Domestic Arch.*, pp. 68 f.

However, on the east side we have a peculiar aspect of Fustat architecture. In the usual manner, two rooms, O and L (VII-3/4) open on the walk-way; but where we should have a third room to complete the *bayt* we have two niches, backing rooms K and K' with which they share a common wall, implying some conjointure with the ensemble around courtyard A (VII-4/5) to the east. This is also implied by the canal running from room J (VII-9) of that ensemble and continuing under the walkway fronting these niches and rooms O and L <sup>(1)</sup>.

Because of this evidence of conjointure, one may date both ensembles to the same period and to that of the ensemble to the south around courtyard M' (VII-15/20), i.e. to the Fatimid period, 11-12th century. All were built on earlier structures and involved discontinuing canalization systems : H-L' in VII-4, C-J-D' in VII-8, and Z-Y-W in VII-9/10. The covering of basin A' (VII-4), to be appreciated in pls. XIV-36 and XV-38 in FEPR '64, may represent a late 12th century action <sup>(2)</sup> or it may be part of the conversion of the ruins here into the pottery requiring the clay mounds, the granite grinding equipment, and glass kilns emanating from the 1964 excavation. Again the earliest habitation was proven by the traces of mud-mortarted brick walls throughout these ensembles to the NW of the impasse <sup>(3)</sup>.

#### 4. INTERPRETATION OF ENSEMBLES.

When one studies the ground plan of the re-cleaned and recharted area of Fustat-A excavated in 1964, one is faced with some clearer outlines and less clear utility. To recapitulate : we have

- a) To the east of the impasse three courtyards : A (VIII-7/8/12/13), H (VIII-11) and R (VIII-2);

<sup>(1)</sup> This canal can be seen to the east and north of courtyard A'' (VII-3/8) in FEPR '64, pl. XI-29. In the center of the photo is pit A' (VII-3), with its traces of shallow vaulted superstructure, which is more obvious in Section b-b in Plan III herein.

<sup>(2)</sup> A possibility arising from the dated shard found in the lower loose fill in VII-4; it gives the date 556 A.H. (1161) and is illustrated

in FEPR '64, pl. XV-40.

<sup>(3)</sup> From the gutter between pits Y and W (VII-9/10) came a glass weight of Ubaydallah b. Habhab, the finance director of Egypt 720-34 A.D. (This is presently in Princeton University Museum, our reg. no. 64-4-34). That the area was completely covered and paved can be seen in FEPR '64, pl. XII-33.

- b) To the west a lovely ensemble around courtyard M' (VII-15/20); and
- c) To the NW, two large courtyards : A (VII-4/5) and A'' (VII-3/8).

In the first instance we have possible conjuncture on the commonality of room B (VIII-6/7) to all three courtyards, and the common sanitation system from sump B' (VIII-7) to pit I (VIII-12), serviced from the street adjacent to the aqueduct. In the third we have the common wall shared by K' and the niches built along the eastern side of courtyard A'' in VII-3/8; and the common canalization running from room J (VII-9) to the service pit at G' (VII-2). Thus, even if we admit two large domiciles, a three courtyards one to the east of the impasse and a two courtyards one to the NW, we are left with the area at the head of the impasse, K and M (VII-5), the former of which has a sanitation canal beneath its flooring which has its origin in the ensemble relative to courtyard R and with no double walling between them and the eastern units of the ensemble around courtyard A (VII-4/5).

Yet double walling does obtain in the units (U-V-O-P) *wedged* between the ensemble around courtyard M' (VII-15/20) and that around the *atrium*-like courtyard A'' (VII-3/8). It would seem unlikely that these units, containing two fine water-holds U and V, would have an existence independent of the ensembles on either side. Hence, unless one is adamantly anchored to the thesis one-courtyard-equals-one-house, it is more likely that we have here a process of «enthroning» of the earlier separate domiciles, while maintaining some of their walls within the plan of the later, larger building. We have most hesitantly argued such a process in Area F, south of the *Darb al-Ma'āsir* in Fustat-B<sup>(1)</sup>; we sense it in operation here, particularly when confronted by the suppression of earlier sanitation systems and the common usage of later ones by the ensembles re-studied in this season. Our totality with the more pertinently conceived impasse seems near cousin to Bahgat's Maison I in its entirety as presented in figs. 4 and 5 of *Fouilles*.

<sup>(1)</sup> Cf. FEPR '68-I, pl. XXIX; FEPR '68-II; FEPR '71-II; and FEPR '72-II, in all of these see those parts relative to Area F.

## B. — THE AQUEDUCT.

In purely archaeological terms, the surprise of the 1964 season had been the aqueduct bordering the street to the south which serviced the ensembles described above. Nothing in the sources alluded to it, and it was not considered by Bahgat nor drawn as a trace element in figures 1-3 in *Fouilles*. This is strange in that the course of the stone topping of the aqueduct was/is clear through the mounds in this lower area of Fustat. (In its upper reaches, to the east of Fustat-B, the course was obscured by the mounds.)

Though diverted to Fustat-B, we remained intrigued by this utterly unique (for Fustat) civic device. In Dec. '69 - Jan. 70 we were permitted to return to Fustat for the specific purposes of making stratigraphical analyses within Bahgat's published area and to investigate the composition and possible dating of the aqueduct. The results of this work are available in *Re-dating*. Suffice it here to state that we proved the aqueduct was built sometime right before or immediately after 1000 A.D. relative to a glass weight of the Fatimid Caliph Al-'Aziz (975-996 A.D.) found in the sub-structure.

Subsequent to this investigation, the Egyptian Antiquities Service, under the direction of Mr. Abd al-Rahman Abd al-Tawwab, uncovered a further two hundred meters in the area to the east of Fustat-B, including a branch line. Structurally these portions are comparable to the part uncovered in Fustat-A and can be given a comparable dating<sup>(1)</sup>.

During this short season we uncovered a further 105 m. from the 65 m. section revealed in 1964 (Plans I and IV; Pl. XXX, C). Though not permitted to proceed beyond the concession area of Fustat-A, one saw that the path of the aqueduct clearly ran towards the Mosque of Amr. With the threat of housing schemes imminent on Fustat, we will surely lose the opportunity to find the three aspects of the aqueduct necessary for understanding its operation: *viz.*, the origin of

<sup>(1)</sup> FEPR '64, pp. 16 f. and pls. V-12 and VI-14. The piping and substructure can be seen in *Re-dating* p. 141 f., fig. 5 & pl. 20. Those sections uncovered by Mr. Abd al-Tawwab are shown in the archaeological

survey map of Fustat and Old Cairo prepared by Dr. Antoni Ostrasz in 1979, as yet unpublished but available in the Egyptian Antiquities Organization and ARCE-Cairo. Also *Redating*, p. 143, n. 30.

the water supply, its terminus, and the check-point where the water was pumped *up* to the higher level of the habitation in and to the east of Fustat-B<sup>(1)</sup>.

Both sides of the aqueduct were cleared to determine if any diversion to the local domiciles took place. As in 1964, no such diversion was discovered, which can only mean that this hydraulic system was built for the *faubourgs* to the north, those housing the *haute bourgeoisie* on either side of the *Darb al-Ma'āsir*, whose path was established by the excavations of 1968 and 1971<sup>(2)</sup>. To make doubly certain, a portion of the attendant mounds on either side was removed and the masonry remains examined archaeologically.

The first part (in quadrants X-12/13/17/18 in Plan IV) had wall traces along the street attendant to the aqueduct, but there was no sign of a take-off pipe within the street fill or the revealed masonry remains. The latter however included an octagonal basin in a square base (B in X-17). Traces of piping appeared on two sides of the basin. But most importantly it had been covered in a later period and given a brick paving (Pl. XXXI, A), a situation exactly like that of basin A' (VII-4), which means that this particular area was utilized at a later period, possibly that of the pottery to the east. Behind it was a large pit, A in X-12, (app. 2.5 m. in diameter) with a small shallow opening, fed by a narrow canal, whose path was covered by a wall of rough boulders (Pl. XXXI, B). As the contents of A, which showed mud at app. 3 m., were specifically of the Mamluk period, we must see the utility of this pit and canal as being relative to the pottery, though the hewing could have been much earlier as its shape parallels others in Fustat-B, which have been proven to be Fatimid and pre-Fatimid<sup>(3)</sup>. Except for traces of two-period constructions (as at D in X-18 in Plan IV) the remains are contemporary with the aqueduct. But to repeat, no trace of « take-off » from the aqueduct was evident.

Further to the SW on the other side of the aqueduct an area 8 × 12 m. containing masonry traces was excavated (See Plan IV and Pl. XXXI, C). The *ḡabal* base was much higher here. It was obvious that a distance separated the

<sup>(1)</sup> A sense of the rise of the *ḡabal* in Fustat-B can be gleaned from the section drawing on p. 222 of Shard Count.

<sup>(2)</sup> FEPR '68-II, Plan I and FEPR '71-II,

section C and Plan I therein.

<sup>(3)</sup> Cf. FEPR '65-II, fig. 1-a; FEPR '66, fig. 24; FEPR '68-I, fig. 16; FEPR '68-II, fig. 7-b, and Pits, fig. 5.

masonry remains from the aqueduct, which may imply a street, which means that the aqueduct might have proceeded down the middle of a rather wide throughfare, app. 3 m. in width. This would be necessary to effect the servicing of pits B (XIII-10) and C (XIV-1). The former of these was no doubt the exit point of a sanitation system with the familiar vaulted opening on the street, and the latter was a general water-hold for the domicile <sup>(1)</sup>.

Both of these pits were undisturbed, the fills provenly Fatimid of the 11th century, whereas that of trash-pit A, a one meter deep rough gouging of the *ğabal*, was certainly earlier, with many pieces of schist objects <sup>(2)</sup>, and definitely pre-Fatimid. Again no «take-off» from the aqueduct was encountered.

It remained to re-test the analysis of the substructure of the aqueduct as reported in Re-dating. However, this time we desired to include a section of the street to see if the latter was laid down at the time of the aqueduct, or if the aqueduct took advantage of an already declared route. At a wide point of the street at A in VII-23 and attendant to the covered canal leading to pit Y in VII-24 a cut of 1.25 m. width was made into the street, after which the contiguous part of the aqueduct and its sub-structure was dismantled (Pl. XXXII, A). The street cut and its contents (Pl. XXXII, B) proved the usual pattern for Fustat streets, both in the ARCE concession and those parts analyzed by the Fustat Expedition within Bahgat's excavations (cf. Re-dating): a descent through the strata from 11th century Fatimid to the late 7th century, the latter observable by the absence of any glazed shards and the presence in the lowest layer of two imitation *dodecanoummia* and a large copper of Heraclius <sup>(3)</sup>. The cut into the aqueduct yielded the same evidence as that from the cut made in 1971 and analyzed in Re-dating.

<sup>(1)</sup> A discussion of these distinctions can be found in Pits, pp. 61 f., and *Fouilles*, pp. 94-102.

<sup>(2)</sup> Cf. Ancillary, pp. 5-9 for a discussion of schist-soapstone.

<sup>(3)</sup> The norms of this type of analysis can be found in the Reports of all seasons between 1965 and 1972. Separate summations can be found in Re-dating and Numismatics, and the relevant artifact criteria are examined in

Pits, Ancillary and Fatimid Filters. A part of the street, between L and W (VIII-16/17) had to be dismantled to find the wall traces of H (VIII-11) on the *ğabal*. From the middle strata came an Abbasid, 9th century glass weight and from the lowest layers two imitation *dodecanoummia* and a Byzantine copper. These support the evidence of the cut across the street.

Thus the street antedated the aqueduct and was « disturbed » by having the latter fitted within it. As was proven in Fustat-B, the streets in Fustat-A go back to the earliest settlement of the *ḥiṭṭa* and provided the defining limits of later domiciliar constructions, though such constructions might, in a process of consolidation and enthronging, entail the construction of (then) contemporaneous entryways and impasses. But the domiciles along our particular street received nothing from the aqueduct, which must now be seen as wholly « private » to another, more affluent district to the north and north-east, one related to Fustat's noblest thoroughfare — the *Darb al-Ma'āsir* <sup>(1)</sup>.

### C. — THE HIGH MOUND IN SECTOR XIX.

This particular mound and its odd configuration, Gibraltar-like with outcrops, has been published twice : FEPR '64, pl. I-1 and Fustat-Arts, p. 188. It was the highest mound in Fustat-A and challenged further investigation. It was either a *natural* mound; or, because of its proximity to Bahgat's excavations a tip-heap <sup>(2)</sup>; or, the tip-heap of squatters and scavengers. The latter was the case with the sections of mounds investigated in Fustat-B and published in Shard Count.

Without reference to the *ḡabal* which was not visible on the north side, the mound appeared between seven and nine meters high. But the *ḡabal* was higher here than in the area investigated in 1964 and re-analyzed in Part A of this Report, and the mound was in reality but 6 m. above the *ḡabal*. The strategy adopted was to reduce the whole mound in app. 50 cm. sections to see if any *sibāḥ* appeared; then following its appearance to reduce half the mound in comparable layers until the *ḡabal* was reached. The layers became wider as the investigation proceeded as can be seen in Fig. 2. *Sibāḥ* in quantity appeared at Level 6 (i.e. at 9 m. on Fig. 4), after which the depth of the strata was reduced and the *ḡabal* appeared at level 14 of the cut (Fig. 2 and Pl. XXXII, C).

<sup>(1)</sup> The approximate area which contains the street with the aqueduct can be seen in Casanova's *Reconstitution topographique de la ville d'al Fouṣṭāṭ*, volume I in three parts (MIFAO, t. 35), Cairo, 1913-19, pp. 50-56.

<sup>(2)</sup> It is the southernmost point of the

Fustat-A concession, and was directly adjacent to his revealed street pattern, for which see Plan I herein and *Fouilles*, fig. 3. Bahgat's Maisons II and IV are re-produced on the former to give a sense of the contiguity.

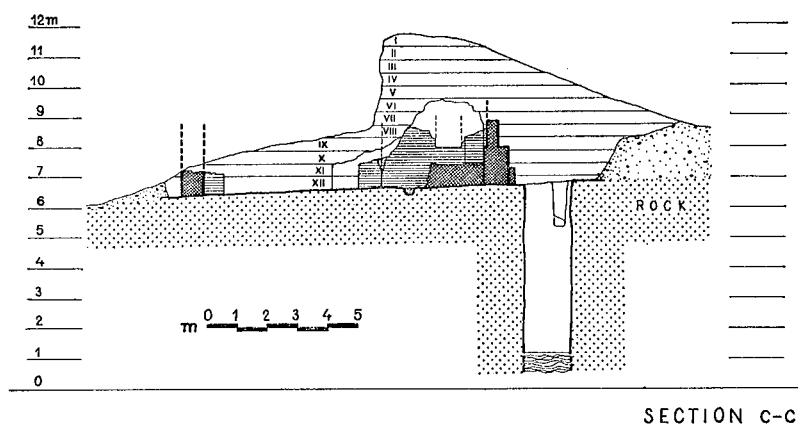


Fig. 2. — Section of cut into mound at intersection of quadrants XIX-8/9/13/14 imposed across section of masonry remains planned in Fig. 4.

As is obvious from Table 1, almost the entire evidence from the top levels is of Mamluk origin : Mamluk Sgraff and Slip, imitation celadon, underglaze painted and silhouette wares <sup>(1)</sup>. From the edge of level 5 came a copper of Sultan Šaʿbān II (1363-70 A.D.). After this point materials more specifically associated with the Fatimid period came through the *sibāḥ* while the older wares were found at the edges of each successively wider stratum. This means that an inner body of *sibāḥ* was evolving within and antedated the large outer mound. In turn, we may conclude that this mound is *natural* and represents the accumulation of civic debris from about the last quarter of the 12th to the finale of the 14th century.

Except for an FFS shard and another of Fatimid Fayyumi splash (siliceous) glazed ware found on the edges of Level 4 (and the latter matched with one from the edge of Level 9), from Level 6 down the materials within the *sibāḥ* and packed fill were typical of Fatimid 11th century. The range can be seen on Pl. XXXIII, A and B : imported S'ung celadons and porcelains, one of the latter (lower left Pl. XXXIII, B) a rarity for Fustat in that it had a square base but obviously rose to a round rim <sup>(2)</sup>; lustre wares, FFS and underglaze painted imitations of

<sup>(1)</sup> These wares are all described and illustrated in Shard Count.

<sup>(2)</sup> The typical Northern S'ung carved petal design has been discovered elsewhere in Fustat;

lustre<sup>(1)</sup>, and siliceous glaze wares with polychrome oversplash glazes, which one may now term « Fatimid Fayyūmī »<sup>(2)</sup>. There have been fragments of typical Fatimid filters and three fragments of a novel relief glazed ware where the different

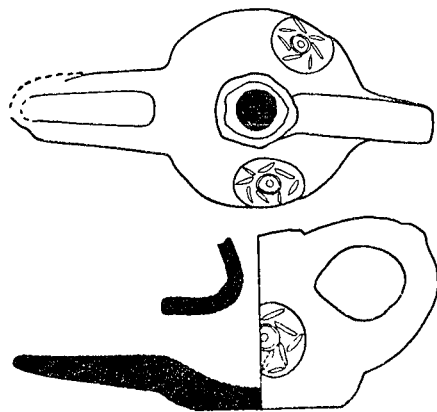


Fig. 3. — Dark green glazed lamp with stamped roundels on either side of neck. From Level 13 of cut into mound in XIX-8/9/13/14. 11th century. Length 11.0 cm.

coloured glazes (in this case white and honey gold) are divided by a rough *cuerda seca* technique, for which see Pl. XXXIII, A, right side second from bottom. Typical Fatimid lamps all siliceously glazed, came forth in quantity, one of which bore a round whorl design stamped through the green glaze on either side of the intake<sup>(3)</sup> (Fig. 3). Though we lacked coins, an 11th century green glass *jeton* was found in the *sibāh* in Level 6.

As building remains had come through the lowest part of the cut in XIX-9 (see Fig. 2), we decided to clean

as much as possible east of the low packed earth to be seen in Pl. XXXII, C to confirm the dating and to assess what sort of habitation was present,

these and the one in Pl. XXXIII, A herein can be understood by referral to Chinese-I, figs. 25-34 and pls. 8-10. The porcelain with the square foot is paralleled by a celadon shard of the same period and provenance published by Nils Palmgren, *Sung Shards*, (Stockholm : 1963) p. 108 and fig. pl. 14, no. 52. It is described as « ... (18) vase (*fang-hu*), quadrangular and of bronze form ... ». Also, cf. *Egypt-China*, pp. 84-89 for a discussion of trade with China during the Fatimid period.

<sup>(1)</sup> The one in the middle of Pl. XXXIII, D is almost a duplicate of that in *Shard Count*, p. 230. Indeed on the basis of our strati-

graphical work it is now possible to put these wares decisively in the 11th century.

<sup>(2)</sup> This ware is illustrated by Pl. XXXIII, A : upper row far left and second row second from right. A water bottle of this ware may be seen in fig. 10 of FEPR '68-I. Lamps and lamp fragments of this ware have been found throughout the excavations and where in undisturbed *loci* are always of the 11th century.

<sup>(3)</sup> These were all of Lamps' Types G-H-I, all of which may now be clearly deemed Fatimid, and here all of the 11th century, though no doubt, as he suggests, continuing well into the 12th.

relative to what we had found both in 1964 and elsewhere this season and to the immediate reality of Bahgat's excavations. The results can be seen in Fig. 4.

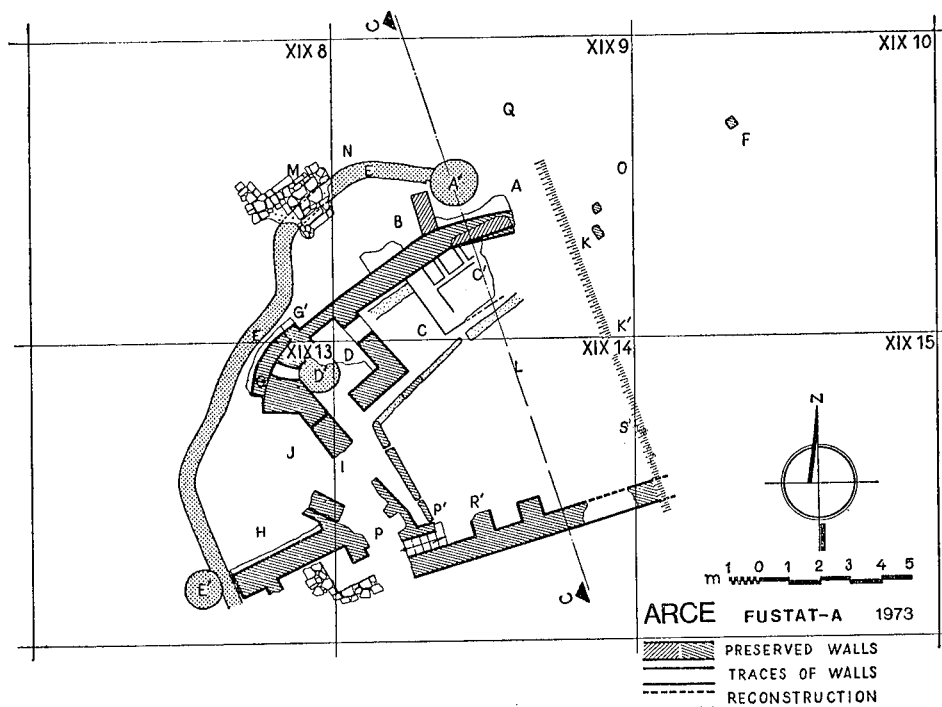


Fig. 4. — Plan of excavated area in XIX-8/9/13/14. The hatched line to right represents line of cut into the mound and shown in Pl. XXXII, C.

There is an incompletely excavated asymmetrical open area, really exposed *ğabal*, at L (XIX-14). On two sides a narrow runnel was gouged in the *ğabal* which was later (?) covered by bricks. There were three halter-holds (?) carved out of the *ğabal* in area L (Pl. XXXIV, A). At C' (XIX-9), there appeared the remains of what looked like two feeding troughs and part of a third. (Their position can be seen in Pl. XXXIV, B to the right of the stone pillar, one of two at K in XIX-9; the outlines appear *on* the platform-like packed and plastered fill). If the gutter running around the exposed part of L is construed as an urine runnel, we have the semblance of a stable, or, at the very least, some aspect of animal

housing<sup>(1)</sup>. One may then surmise that pit D' in room D, accessible both from the stable-yard L and auxiliary room C, was the stable water-hold. Thus it becomes imperative to excavate to the NE to solve the extent of L and its peculiar domestic utility<sup>(2)</sup>.

The fills, wherever *in situ* (the depredation was somewhat large-scale), proved to be 11th century, with an admixture of earlier splash and lead-glazed wares. On the *ġabal* at A (XIX-9) were traces of brick laid in mud mortar, and also in the exposed area around the pillars at K. But the best dating material came from the deep-hewn (app. 1.50-2.00 m.) canal E, whose sinuous path wound from sump E' (XIX-13), below the thick paving at M (XIX-8), which can be seen in Pl. XXXIV, B, middle right, and round to the deep pit A' (XIX-9), which with the edge of the canal E can be seen in Fig. 2. Whereas pit D' (XIX-13) was totally disturbed, both E' and A' appeared untouched by those who had scavenged the area elsewhere, as also was most of the fill of canal E. E' was a sump, slightly less than a meter in depth, whose fill contained two filters easily datable to the 9-10th centuries<sup>(3)</sup> and a white-buff ware one-handled jug intact except for a chip at the rim (Pl. XXXV, A). From the deep, undisturbed fill of the canal E in XIX-8 came a fine thin-walled white-buff ware juglet intact except for a chip at the rim (Fig. 5) which may equally be assigned to the 9-11th centuries<sup>(4)</sup>. Further

<sup>(1)</sup> A similar open area which could hardly be considered a courtyard was uncovered in 1972 to the west of what we termed «ensemble (b)» in 1971. Again, a number of halter-holds appeared carved into the *ġabal*; cf. FEPR '71-II and FEPR '72-II. The same supposed halter-hold appeared on the *ġabal* in the recent Japanese excavations in the area between Bahgat's excavations and the Mosque of 'Amr; cf. Kiyohiko Sakurai and Mutso Kawatoko, *Archaeological Investigations of the Remains of al-Fustat in Egypt*, Publication of Waseda University (1979), p. 30, pl. 6. (In Japanese).

<sup>(2)</sup> A slight move in this direction was made at the very end of the season. Two stone monolithic pillars stood up through the

packed fill at K (XIX-9). Excavations around these proved them to be embedded in masonry with no ostensible symmetry (Pl. XXXIV, C). A third pillar was apparent through the fill at F (XIX-10). Generally such pillars were sheathed in masonry and were meant to take the heavy loads of upper floors; cf. FEPR '64, pl. II-4 and FEPR '65-II, pls. X-a and b plus Plan II therein.

<sup>(3)</sup> Cf. Ancillary, pp. 9-16 for dating criteria.

<sup>(4)</sup> Except for lacking a handle it is almost the duplicate of one found in 1968; cf. FEPR '68-II, fig. 11. The ware is exact kin to those of the vessels and filters (particularly those with external decoration) discussed in Pits, figs. 6, 8 and 9 and pls. XV-2, 3, 8 and 9 and XVI-4; and Ancillary, pp. 8-16.

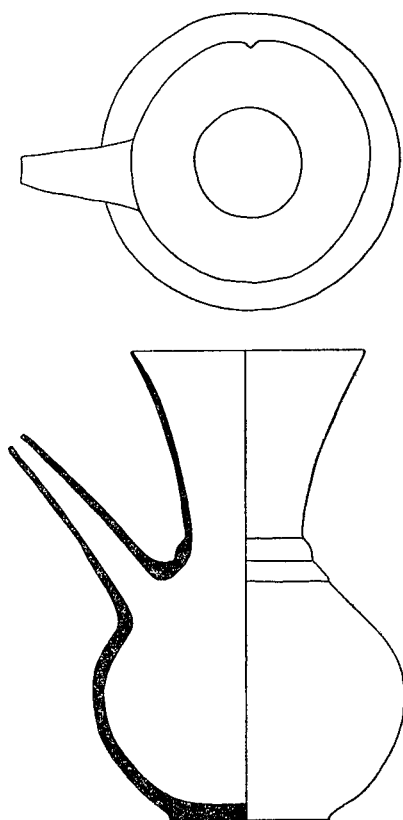


Fig. 5. — White-buff ware juglet, found in canal E (XIX-8). 9-10th century. Ht. 12.4 cm.

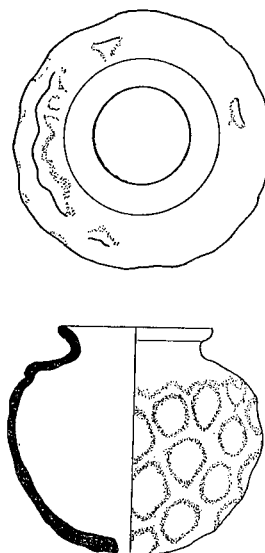


Fig. 6. — Bulbous yellow glass toilet bottle, moulded honey comb decoration external; found in canal E below pavement at M (XIX-8). 9-10th century. Ht. 6.0 cm.

along in the same *locus* three light green glass vessels came out intact, no doubt medical measuring vessels for precious powders and liquids <sup>(1)</sup> (Pl. XXXV, B). From the fill of the canal below the high-standing double pavement at M in XIX-8 (which was removed to effect the cleaning of the canal) came a bulbous-bodied round bottomed yellow glass toilet bottle, with a moulded honey-comb motif external and a set of lug-like protrusions about the shoulder (Fig. 6). The latter were unsymmetrically raised and part of the base was missing <sup>(2)</sup>.

<sup>(1)</sup> Another example of the same class was found in 1964 in the muddy depths of the gutter leading to Pit I (VII-20) in Plan II herein and published in FEPR '64, pl. XV-41. Others may

be studied in MG, Taf. 3. For such vessels acting as capacitance vials, cf. FEPR '66, pl. IV-c.

<sup>(2)</sup> Cf. MG, Tafs. 9 and 11 for mode of decoration.

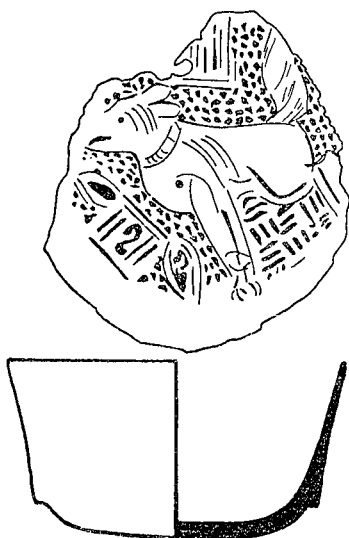


Fig. 7. — White-buff ware filter with zoomorphic motif; found in packed fill above canal E and around top of sump E' (XIX-14). 9-10th century. Diam. 9.0 cm.

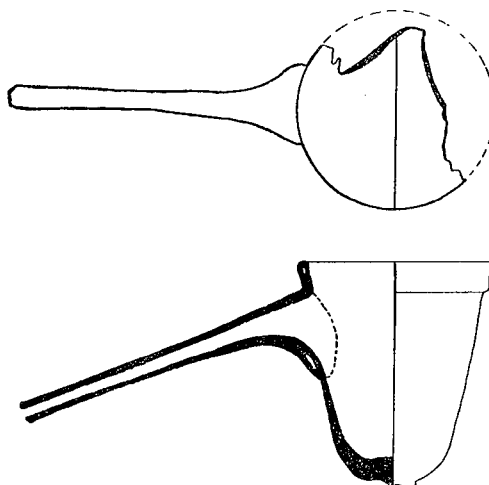


Fig. 8. — Light green glass cupping vessel; same find-spot as Fig. 7. 9-10th century. Ht. 6.0 cm.

However, it was from the exacting, almost tedious cleaning of canal E and the area immediately attendant to pit E' (XIX-13) that we found the evidence to clinch the posited dating of 9-10th century. First there was the typical filter with concave placement along the neck of the vessel with an animal motif amid rucked latticing<sup>(1)</sup> (Fig. 7). Then there was the thin-walled, light green glass cupping vessel in Fig. 8, which was incomplete. Next came two matching highly devitrified fragments of the base and body of a clear glass small chalice or goblet with a relief-cut frieze of birds passant to the left just above a delicately cut rib. The base is hollow cut and concave, canted out beyond the body line<sup>(2)</sup> (Fig. 9). Finally many fragments of a highly devitrified clear glass bowl which when assembled permitted one to ascertain the rim and the base and portions of an

<sup>(1)</sup> A comparable example can be seen in Pits, fig. 8; while the latticing can be appreciated in Ancillary, text fig. 6-c.

<sup>(2)</sup> The bird motif can be seen on the relief cut bowl discovered in 1971 which is discussed

and illustrated in *Fustat-Glass*, p. 26 and figs. 33-35. This vessel was deemed not later than 900 A.D. A similar theme can be found in MG, Taf. 58-2, which is Egypt, 9th cen.

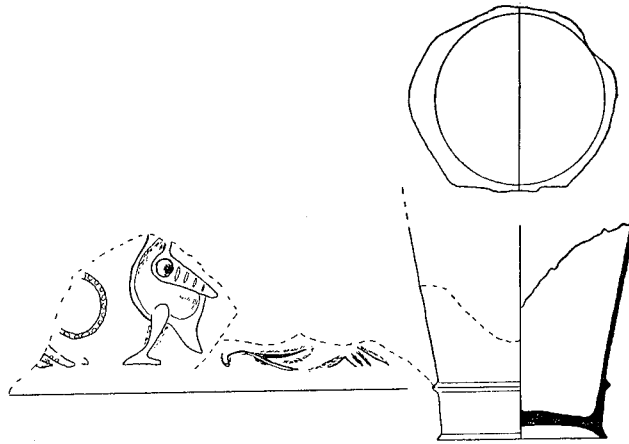


Fig. 9. — Matching fragments of small chalice with relief cut decoration; same find-spot as Figs 7 and 8. Highly devitrified. 9-10th century. Base diam. 4.5 cm.

inscription : all the decoration being in deep relief cut with incised hatching on some letters (Fig. 10 and Pl. XXXVI, A). Though the drawing is an approximation of the original shape, a height of 8 cm. relative to the known rim diameter of 12 and base diameter of 6 cm. would seem to be in proportionate order. It could be that we lack a register of decoration above the twice repeated two-word inscription, but so decisively and deeply cut is the latter that any decoration other than the single rib would imbalance the object aesthetically. Though piteously ruined and incomplete, in its pristine state it must rank as one of the finest objects to issue from an Islamic glassworks<sup>(1)</sup>.

<sup>(1)</sup> It takes its place beside the relief cut ewer and bowl discovered in 1971 and discussed at length in *Fustat-Glass*, pp. 25 and 26. Our foot was even more finely cut than that of the ewer, in that though concavely cut, its central point touches level with the rim of the base : compare Fig. 12 herein and fig. 31 of *Fustat-Glass*. The bases of two other relief-cut vessels found in the ARCE concessions are interesting variations, cf. *ibid.*, nos. 17 and 21, also Fatimid-Saljuq, figs. 2 and 3.

A clue to the point of manufacture of all these superbly cut vessels might be found in the comparison of the parallel cord motif of the ewer found in 1971 and that on a glazed ceramic ewer which Pope and Ackerman would have Sasanian : cf. *Survey of Persian Art*, IV, pl. 188-A. This lends support to the surmise of Prudence Oliver and R.J. Charleston that the Buckley ewer was made in Iraq if not Iran itself : the arguments are assayed in *Fustat-Glass*, p. 25 n. 30. Whatever the

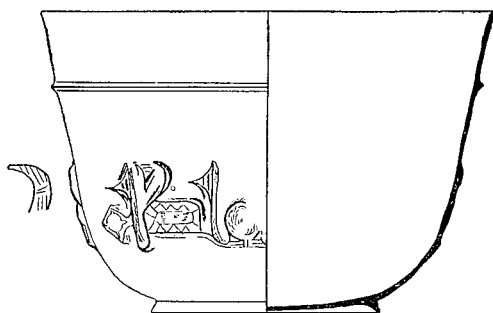


Fig. 10. — Possible reconstruction of clear glass bowl with relief cut design; same fine-spot as Figs. 7-9. Highly devitrified. 9-10th century. Rim diam. 12.0 cm.

of mud) almost exactly analagous to that of the famous pit B, which contained the lusted goblet with the name of Abd al-Samad b. Ali, the grand-uncle of Harun al-Rashid and governor of Egypt in 771-2<sup>(1)</sup>. Portions of two straight sided bowls, similar in shape and of the same tint of glass as that illustrated in Fustat-Arts, p. 194 upper left, were found between 4.0-5.6 m. as were the fragments which assembled into the bell-shaped bottle of yellow glass of very thick walls to be seen in Fig. 11 and Pl. XXXVI, B<sup>(2)</sup>. The amber-yellow tint of the metal is slightly deeper than of the unguent jar in Fig. 8. Equally surprising from the same place were two matching fragments of a green glass bowl, whose ascertainable shape — a lower section of eight cut facets thinned out towards a flaring rounded upper section and rim — is unique in the archaeology of Fustat (Fig. 12 and Pl. XXXVI, C)<sup>(3)</sup>. Again the tint of the glass is akin to that of the green glass vessels found in company with the afore-mentioned lustre goblet. Hence, all of the glass found below 4.0 m. in our pit A' (XIX-9) may safely be dated to the 8-9th century.

place of origin, our vessel can be surely dated to the 9-10 century. No comparable piece, either of shape or decoration, has been published by Lamm.

<sup>(1)</sup> The materials have been fully described in FEPR '65-I, Fustat-Arts, and Fustat-Glass, numbers 3, 5 and 23.

Though not as arresting, still more glass objects were found in the deep fill of pit A' (XIX-9), the end-point of canal E. The upper contents showed an admixture of Fatimid and 9-10th century materials, while below 3.0 m. the fill was definitely earlier, particularly as regards early lead glazed wares and such other materials as to make the fill between this point and 5.6 meters (beyond which it was impossible to go because

<sup>(2)</sup> Cf. MG, Taf. 4-12 which is from Samarrā; Taf. 12-13 of the same shape but with moulded decoration; and Taf. 58-12 and 13, same shape but with relief cut decoration.

<sup>(3)</sup> No comparable shape is published by Lamm, nor is there any late Classical prototype.

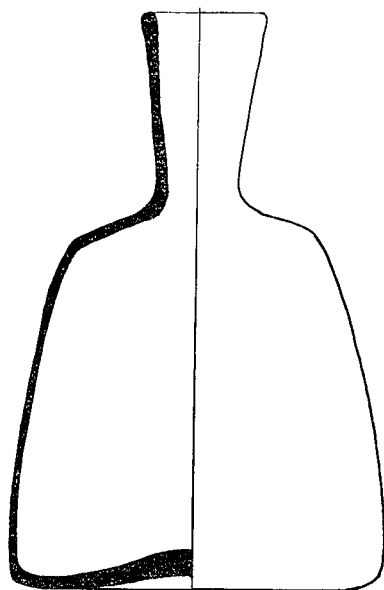


Fig. 11. — Yellow glass thick-walled bottle; shape ascertainable. Devitrified. 8-9th century. Ht. 15.2 cm.

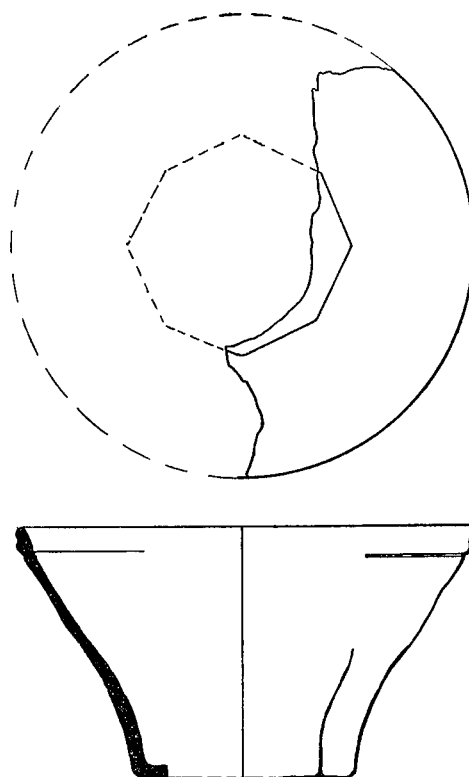


Fig. 12. — Reconstruction of green glass bowl with cut facets from base to mid-height. 8-9th century. Rim diam. 12.2 cm.

Yet even more telling proof of this early dating was provided by three matching fragments of the base and rim of a shallow flat-bottomed bowl of brownish buff clay typical of practically all early lead glazed bowls found in Egypt and Syria in the 8-9th century. The fragments bore no trace of glazing, though so handsome a piece must have been glazed. As it was found in the muddy depths of pit A, it may have lost its glaze through some sort of chemical degradation. Nothing comparable with so rich a decorative pattern has been reported as unglazed; and, as we believe it to be an import, we must suppose the original vessel to have been glazed.

Both the shape and decoration are possible of reconstruction (Fig. 13). Its dimensions — rim diameter 34 cm., height 2.6 cm. — make it one of the largest glazed bowls in early Islam. The moulded decoration is sharp, symmetrical, and in high relief. (This would seem to make it more a salver than a food dish). The shoulder motif is a simple guilloche bounded by a beaded band. The interior is of four vines interlacing two by two. To the point of interlace, the vines compose a sixteen sided star of familiar concentric beading. Then the end of each vine becomes half a palmette, serrated in both major and auxiliary bending leaf. Together with its enjoined fellow vine it encloses a five-leaved serrated palmette with its stem towards the shoulder. A reserving margin surrounds this leaf. There is a half-circular double line at the interlace internal. This motif is repeated four times at the cardinal points. The inner star pattern encloses a quatre-foil pattern, each quarter containing the duplicate of the outer five-leaved palmette, but with stem towards the center and equally held in margining reserve. These inner palmetters are intermediate between the outer ones. The harmony and balance thus achieved must have been impressive, while the various motifs serve to echo those of objects emanating from east of Egypt <sup>(1)</sup>.

<sup>(1)</sup> A summation of this question of early lead-glazed wares (but by no means complete or correct) can be found in the discussion of pieces in the Keir Collection and attendant bibliography : E.J. Grube, *Islamic Pottery* (London : 1976), pp. 25-35; also his discussion

of nr. 71 (pp. 112 ff.), which is supposed to be Egyptian, 9th century. A beautiful early green lead glazed filter bottle, found in 1975, which contains an echo of our palmette leaf, has been published but ignored by Grube : FEPR '65-I, fig. 13 b.

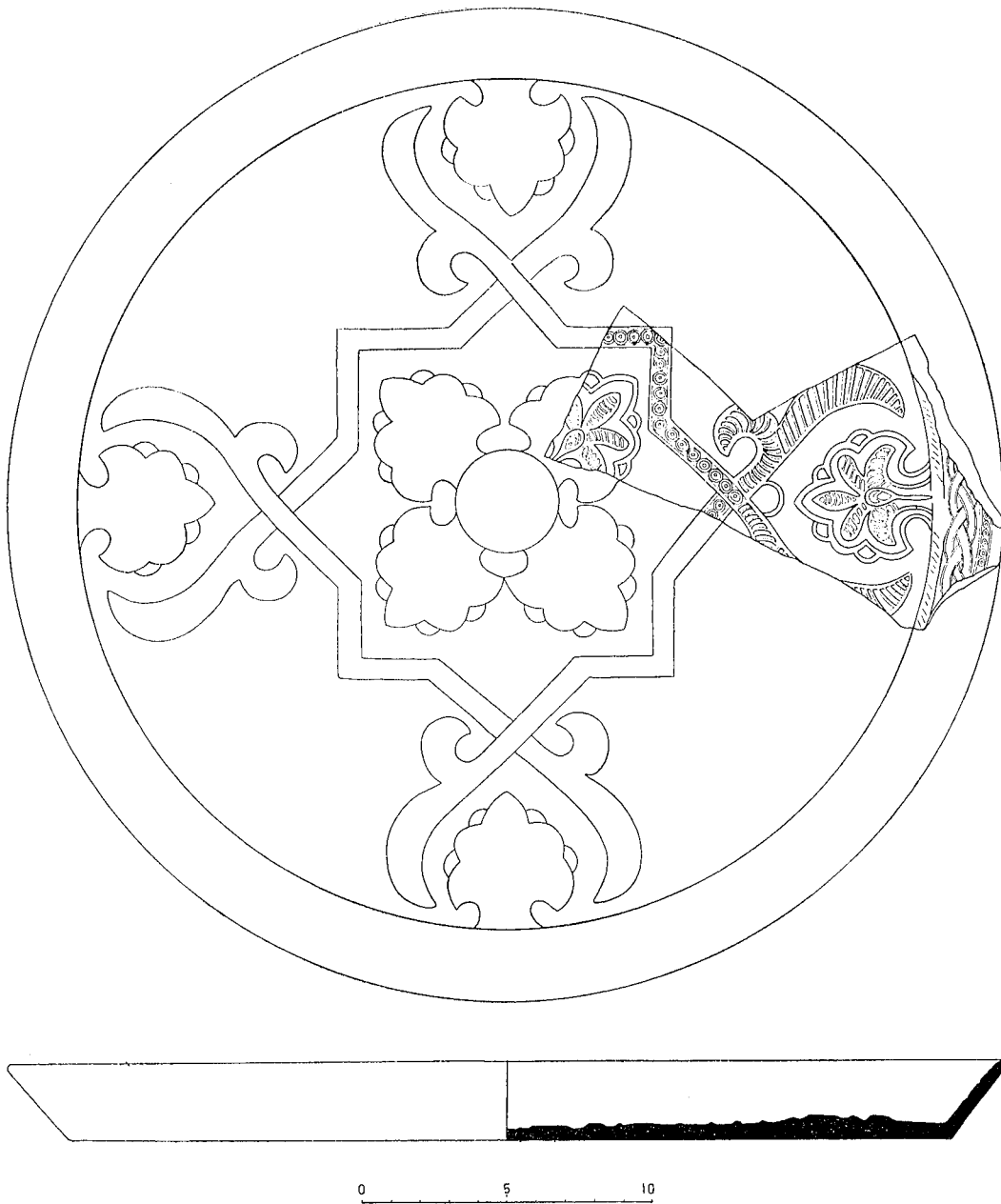


Fig. 13. — Reconstruction of buff-brown ware shallow flat-bottomed bowl or salver.  
Found in muddy depths of pit A' (XIX-9). 8-9th century.

	East Med. Ware	Mamluk Sgraff.	Mamluk Slip	Imit. Celadon	BBW <sup>γ</sup> silhou. wares	FFS	Fatim. lamps	Fatim. lustre ware	Fatim. « reserve » ware	Chinese Sung wares	Ungl. slip. pint.	Fatim. Fayyumi wares	Early leadglazed
Surround Surface	70					2						4	1
Level 1		1			4								
2		3											
3		5		1									
4		11		2		1							
5		18			1					2		1	
6	1	23				1						1	
7	1	55		1		1						1	2 COINS 1 GL. WT.
8		15			1	1						1	
9	1	13			2							1	
10	4	50			2	1	6					1	
11	1	61				6	12	1			2	8	
12	1	31				8		1	1	2		51	22
13	1	24			2	12	19	4	1	2	1	67	
14		26			1	13	18	6	1	4	5	133	

Table I : Analysis of Mound at XIX - 8/9/13/14

The relevant Fustat Expedition publications are abbreviated as follows; all are by the present author unless otherwise noted and *JARCE* stands for the *Journal of the American Research Center in Egypt*.

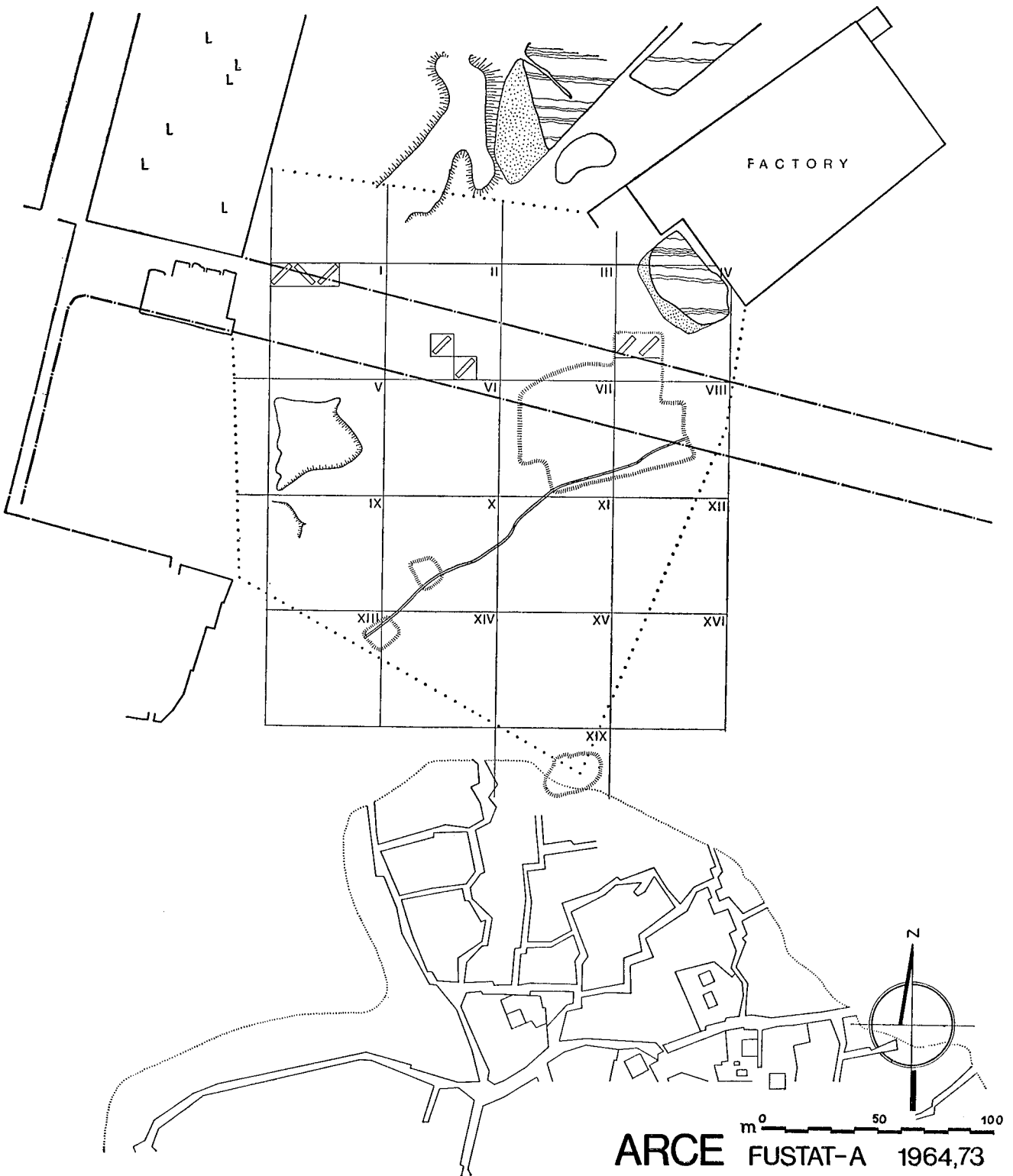
- FEPR '64 « Preliminary Report : Excavations at Fustat » *JARCE*, IV (1965), pp. 7-30.
- FEPR '65-I « Fustat Expedition : Preliminary Report 1965. Part I », *JARCE*, V (1966), pp. 83-112.
- FEPR '65-II « Fustat Expedition : Preliminary Report 1965. Part II », *JARCE*, VI (1967), pp. 65-86.
- FEPR '66 (with W.B. Kubiak) « Fustat Expedition : Preliminary Report 1966 », *JARCE*, X (1973), pp. 11-25.
- FEPR '68-I « Fustat Expedition : Preliminary Report 1968. Part I », *JARCE*, XI (1974), pp. 81-91.
- FEPR '68-II « Fustat Expedition : Preliminary Report 1968. Part II », *JARCE*, XIII (1976), pp. 69-89.
- FEPR '71-I (with W.B. Kubiak) « Fustat Expedition : Preliminary Report 1971. Part I », *JARCE*, XVI (1980).
- FEPR '71-II (with W.B. Kubiak) « Fustat Expedition : Preliminary Report 1971. Part II », accepted for *JARCE*, XVII.
- FEPR '72-I « Fustat Expedition : Preliminary Report 1972. Part I », accepted for *JARCE*, XVIII.
- FEPR '72-II « Fustat Expedition : Preliminary Report 1972. Part II », accepted for *JARCE*, XIX.
- Ancillary « Ancillary Dating Materials from Fustat » *Ars Orientalis*, VII (1968), pp. 1-17.
- Fat. Fil. « Fatimid Filters : Archaeology and Olmer's Typology », *Annales Islamologiques*, IX (1970), pp. 31-51.
- Lamps W.B. Kubiak, « Medieval Ceramic Oil Lamps from Fustat », *Ars Orientalis*, VIII (1970), pp. 1-18.
- Shard Count '68 « The Fustat Mounds : A Shard Count 1968 », *Archaeology*, vol. XXIV n° 3 (June 1971), pp. 220-33.
- Egypt-China « Egypt and China. Trade and Imitation », *Islam and the Trade of Asia*, ed. D.S. Richards (Oxford and Philadelphia : 1971), pp. 81-95.
- Reconsiderations « Fustat : Archaeological Reconsiderations », *Colloque International sur l'Histoire du Caire* (Cairo : 1972), pp. 415-28.
- Fatimid-Saljuq « A Note on Fatimid-Saljuq Trade », *Islamic History : 950-1150 A.D.*, ed. D.S. Richards (Oxford and Philadelphia : 1973), pp. 265-74.

- Re-dating (with W.B. Kubiak) « Re-dating Bahgat's Houses and the Aqueduct », *Art and Archaeology Research Papers*, 4 (Dec. 1973), pp. 138-48.
- Numismatics (with Th. Bianquis and A. Watson) « Numismatics and the Dating of Early Islamic Pottery in Egypt », *Near Eastern Numismatics ... Studies in Honour of George C. Miles*, ed. D.K. Kouymjian (Beirut : 1974), pp. 163-173.
- Pits « The Pits of Fustat : Problems of Chronology », *Journal of Egyptian Archaeology*, vol. 60 (1974), pp. 60-78.
- Chinese-I Bo Gyllensvard, « Recent Finds of Chinese Ceramics at Fostat. I », *Bulletin of the Museum of Far Eastern Antiquities*, N° 45 (1973), pp. 99-119.
- Fustat-Glass (with R.M. Pinder-Wilson) « Glass from Fustat. 1964-71 », *Journal of Glass Studies*, vol. 15 (1973), pp. 12-30.
- Domestic Arch. A.A.Ostrasz, « The Archaeological Material for the Study of the Domestic Architecture at Fustat », *Africana Bulletin*, n° 26 (Warsaw 1977), pp. 57-86.

Two important publications unrelated to the Fustat Expedition/ARCE are abbreviated as follows :

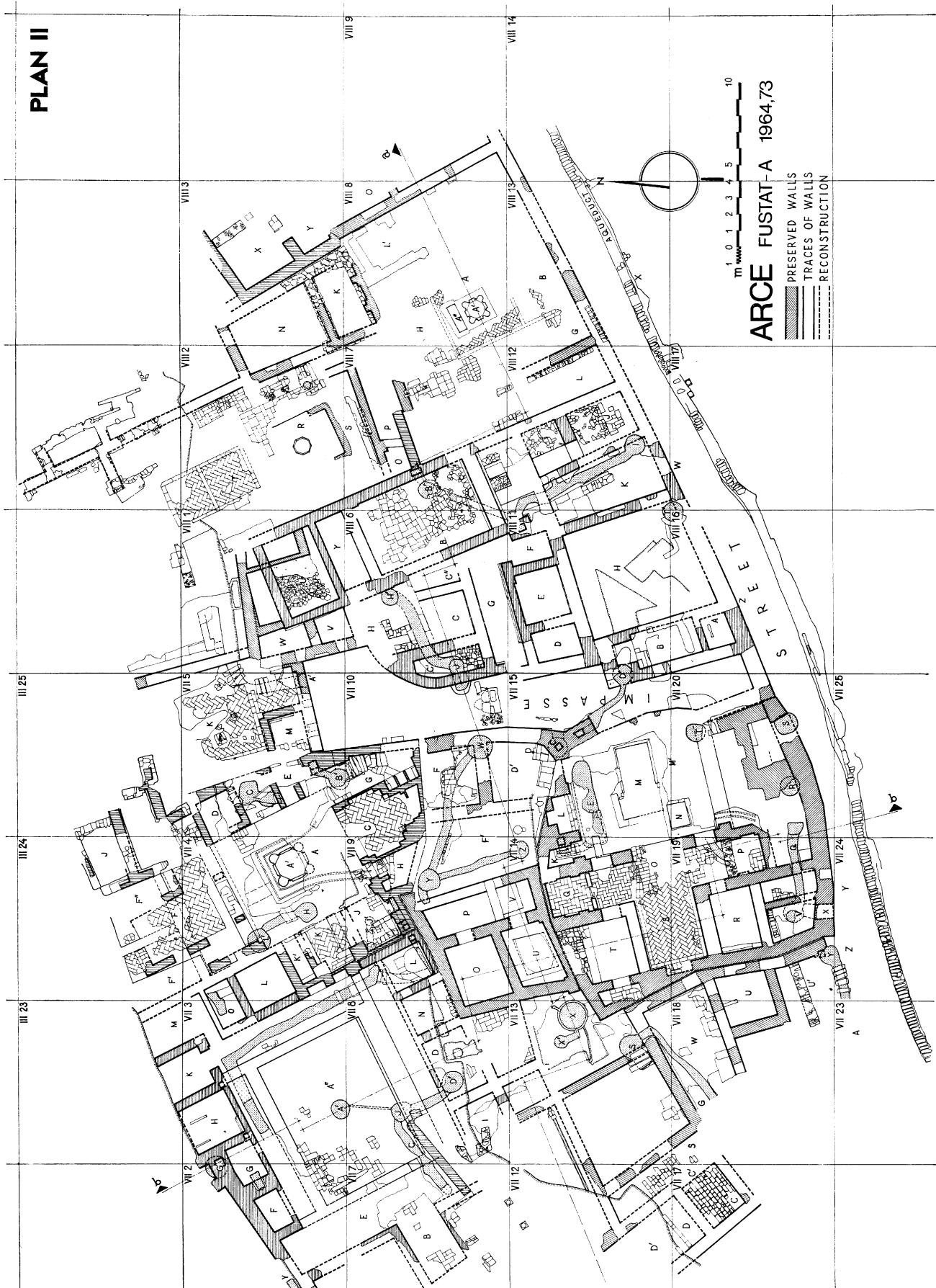
- Fouilles* Aly Bay Bahgat and Albert Gabriel, *Fouilles d'Al Foustat*, Paris (1921).
- MG C.J. Lamm, *Mittelalterliche Gläser*, Berlin (1930).

# PLAN I

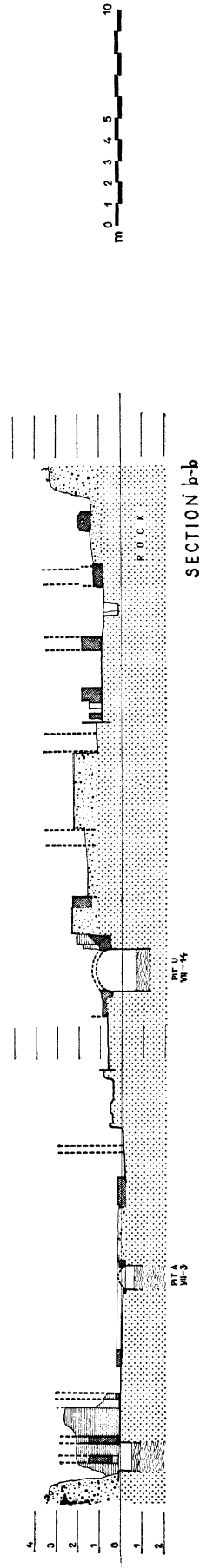
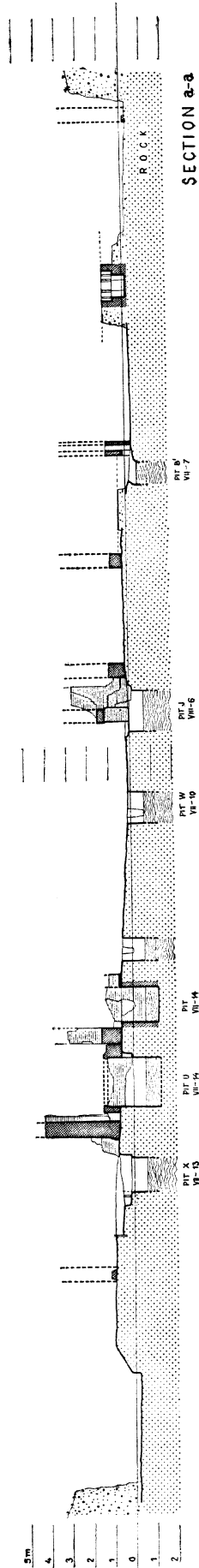


61..

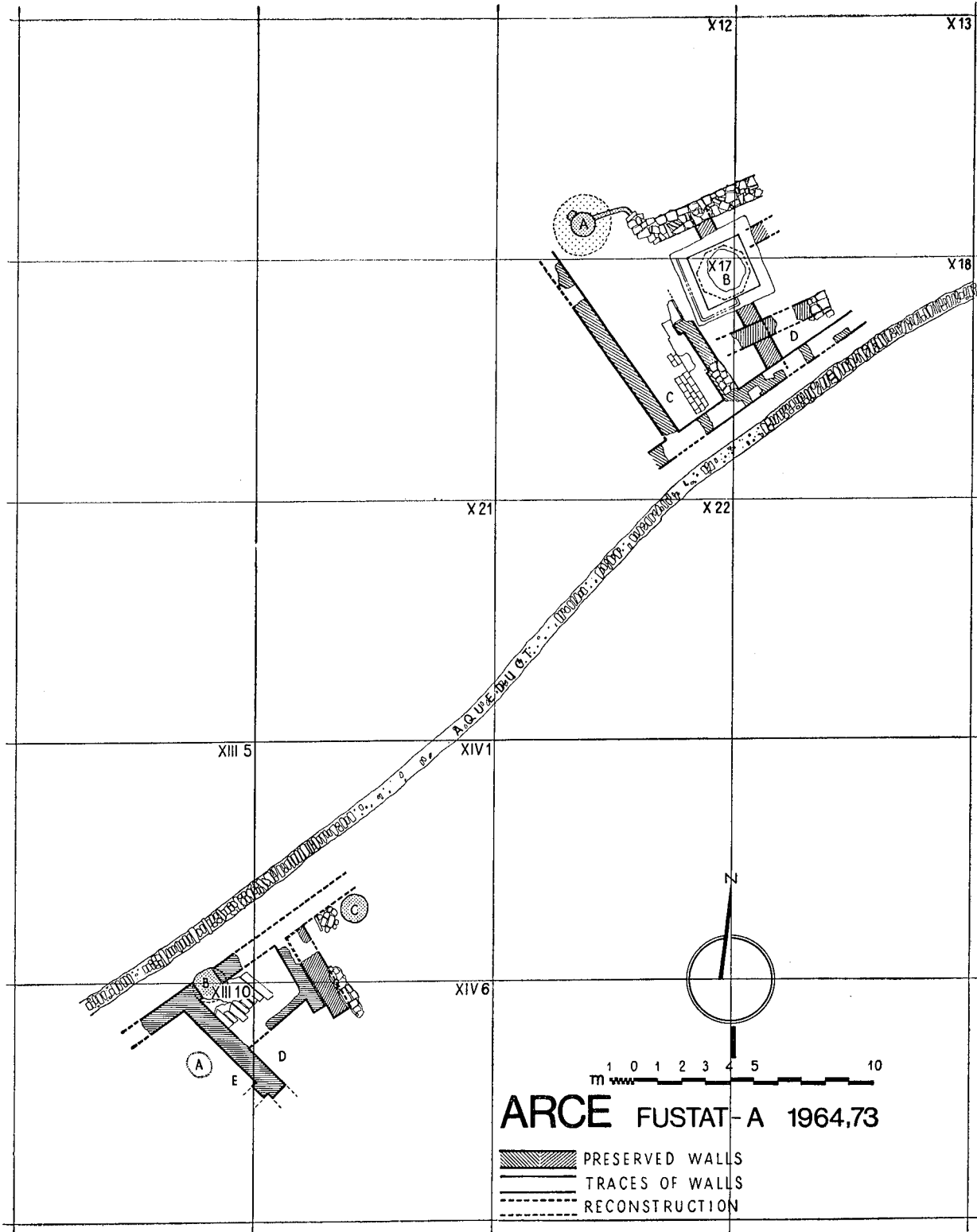
PLAN II



# PLAN III

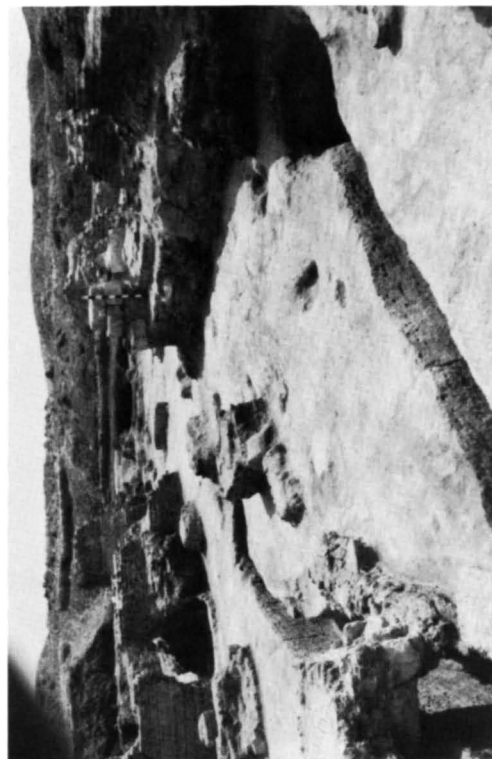


# PLAN IV





B. — Fill of room J, adjacent to canal into Pit I (VIII-12); looking North, street and aqueduct lower right.



D. — Rooms F-F'-D' and canalization Z-Y-W (VII-9/10/14), looking East. Remains of stairway D (VII-15) upper center.



A. — Courtyard H (VIII-11), looking SW; street and aqueduct upper third of photograph.



C. — Courtyard R (VIII-2), looking South.



A. — Rooms S and I (VII-13), looking SW.  
Pit X' (VII-13) center left; C-C'-D upper middle.



B. — Stratigraphical cut at O (VII-14);  
traces of bricks in mud mortar on *ḡabal*.



C. — Path of aqueduct through quadrants  
X-18/21/22 and XIV-1; looking SW.



B. — Traces of shallow vaulted opening of large pit A (X-12) and boulder covered shallow feeder canal; looking SE.



A. — Basin B (X-17/18) with remnants of its later paved covering *in situ*; looking SW.



C. — Excavations on SW side of aqueduct in XIII-5/10 and XIV-1/6. Pit A (XIII-10) in center; looking SE.



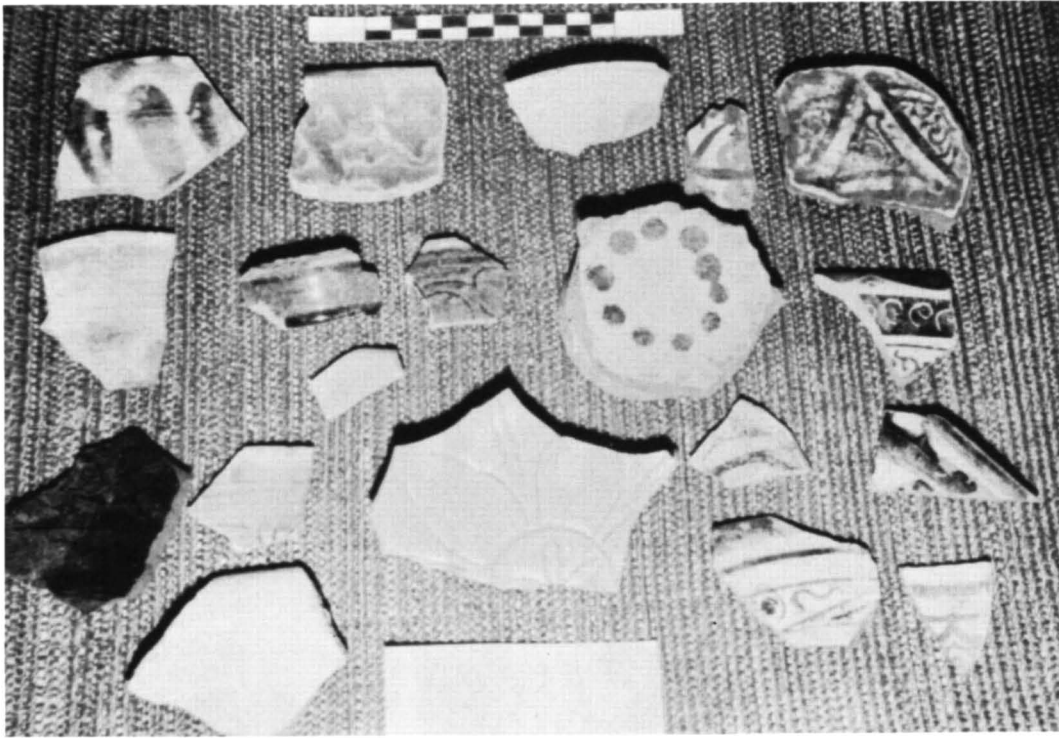
A. — Street and aqueduct in VII-23/24 showing stratigraphical cut at A (VII-23); looking SE.



B. — Strata of street adjacent to aqueduct at A (VII-23).



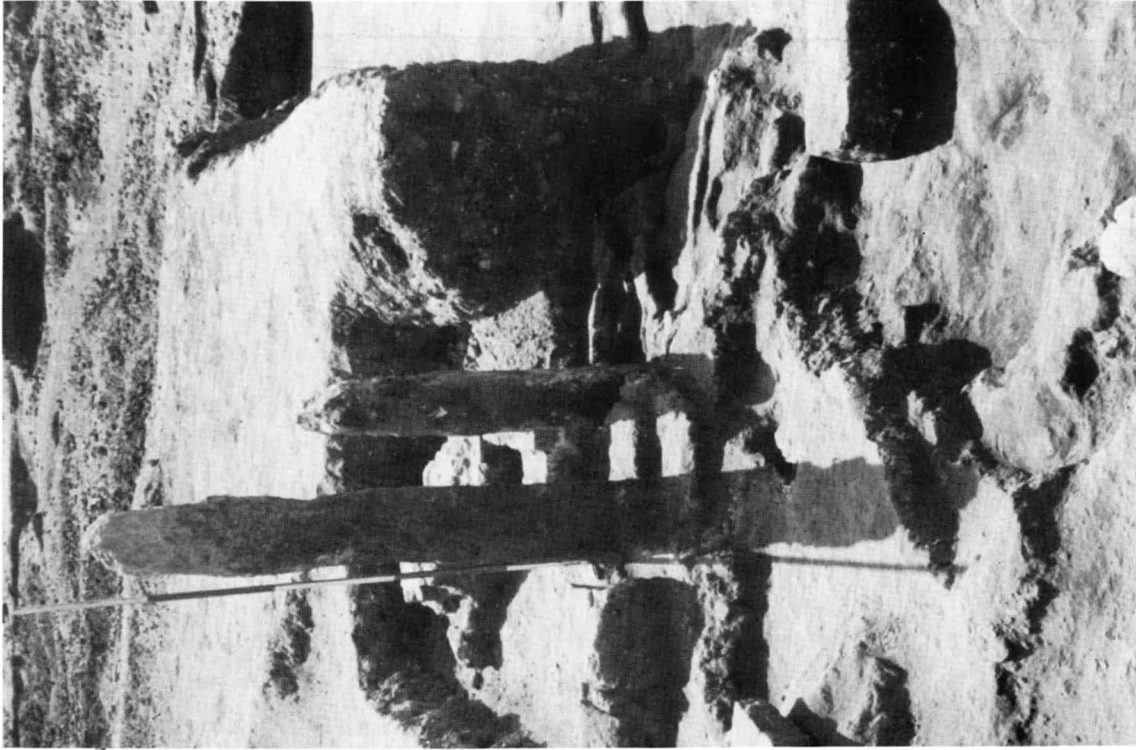
C. — Contour of upper and lower cuts into high mound in XIX. Steps at P-P' in middle; looking NE.



A. — Ceramic sampling from packed fill of Level 13 of cut into mound at XIX-8/9/13/14.



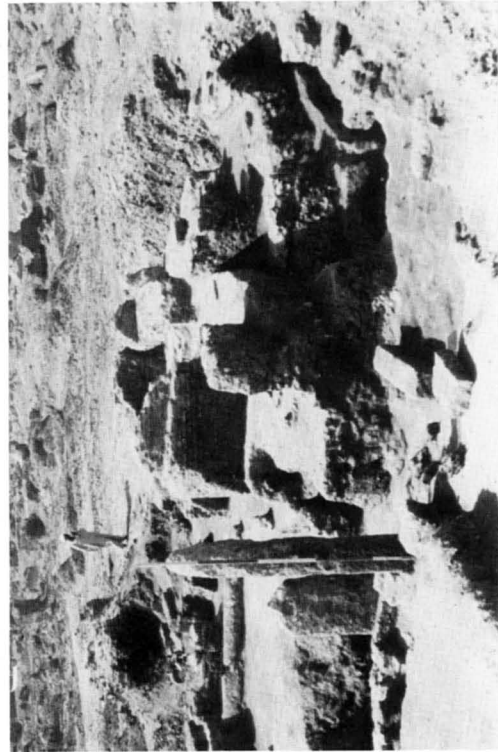
B. — Ceramic sampling from packed fill of Level 14 of cut into mound at XIX-8/9/13/14.



C. — Excavations around monolithic stone columns at K (XIX-9); looking SE.



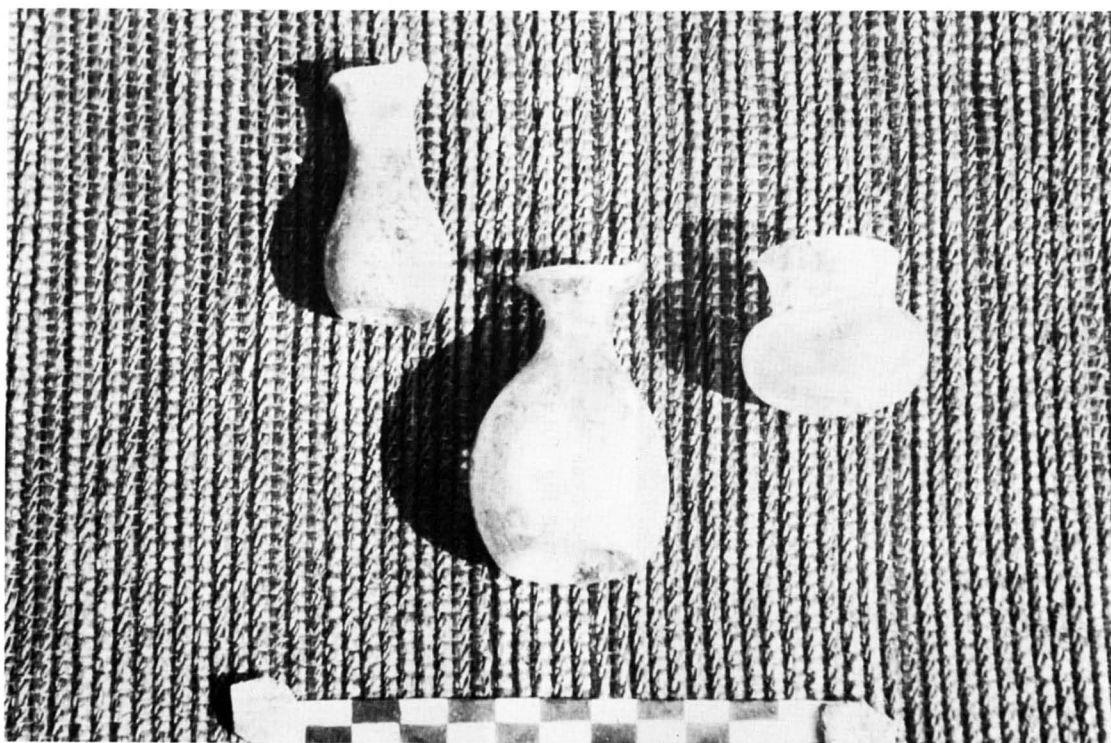
A. — One of three halter-holds (?) carved out of ḡabal in open area L (XIX-14).



B. — View looking SW : stone pillar at K (XIX-9); platform containing troughs at C' to right of pillar; egress of canal E into pit A' middle right.



A. — White-buff ware jug, found in sump E' (XIX-13).  
Ht. 14,5 cm. 9-10th century.



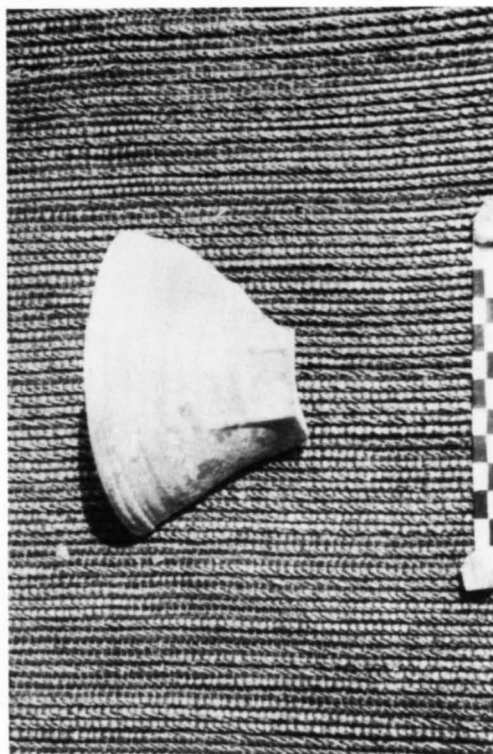
B. — Three light green glass medical bottles, found in canal E (XIX-8). 9-10th century.



B. — Assembled fragments of yellow bell-shaped glass bottle; found in pit A' (XIX 9); see Fig. 11.



A. — Portion of clear glass bowl with relief cut decoration (see Fig. 10). Highly devitrified.



C. — Matching fragments of faceted green glass bowl, same find-spot as Pl. XXXVI, B; see Fig. 12.