

FUAD SAFAR
MOHAMMAD ALI MUSTAFA
SUTON LLOYD

ERIDI



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State Organization of Antiquities and Heritage



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FUAD SAFAR
MOHAMMAD ALI MUSTAFA
SETON LLOYD

FOREWORD

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REPUBLIC OF IRAQ
Ministry of Culture and Information
State Organization of Antiquities and Heritage Baghdad 1981



الجمهورية العراقية
الوزارة العراقية للثقافة والتراث
بغداد

ERIDU

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FOREWORD

The excavation campaign at Eridu, which had been commenced in 1946 by the Antiquities Department in Iraq, is one of the first excavation's operations conducted by the Department in Iraq by almost a wholly national cadre with the exception of (Seton Lloyd) who had joined the expedition as a technical advisor and through his presence in a similar job at the Department itself.

The excavation's findings had largely scattered in all books that issued after this date and the plans of Eridu temples became a pattern relied upon in all ancient architecture history of the old near east.

Similarly, the pottery which had been later known as pottery of Eridu became an important part of Ubaid era pottery and the position of Eridu in the history of civilization is represented by the fact that this town had had a history supposedly dating to the pre-deluge period and the succession of building levels of the temple ever since it was a small shrine until it had become a lofty ziggurat in the time of Ur-Nammu points out to a special sanctity that survived throughout sumerian period. Not only this, but the type of the unearthed temples shows the link between the temples of Tepe Gawra in the north, and the temples of Uruk, Jemdat Nassr in Uruk and Ukair and Eridu itself.

Despite that, Eridu had become insufficient for rendering important data on post ubaid period upto the early dynastic era, the late professor Fuad Safar had had some predictions indicating that the early dynastic era is an Akkadian one in spite of the application of the plano-convex bricks.

There remains the reference to the building of the palace which had been dated to the early Dynastic period. This building is one of the basic evidences that indicate the existence of significant structures of a central administrative character in this era, and the city state system had necessarily been in existence at least ever since Uruk era if not expect it to be basically in Ubaid period.

Despite the long period that elapsed since the work had begun at Eridu, the State Organization of Antiquities and Heritage has paid a close attention to publishing this book which specially deals with the works undertaken by Iraqi expedition, headed by the late professor Fuad Safar, whose excavation results are gathered in a single volume.

FOREWORD

As a matter of fact, Mr. Mohammed Ali Mustafa, the expedition's member (now retired) has taken the burden of making this book ready to be printed as well as preparing the drawings and plans, notwithstanding his health condition, as an expression of loyalty for his close friend and colleague the late professor Fuad Safar and in fulfilment of a pledge towards himself and the organization to achieve this book in full. He actually has done this task so cleverly.

The efforts of the first Iraqi pioneers could not be forgotten and what stimulate our admiration more and more is that they are still liking their career and practising it in spite of retirement and old age.

In conclusion, I hope that you will find the opportunity to acquaint yourselves with this book since it is a record fraught with the entire required information about Eridu and since it contains the answers of so much inquiries.

Acknowledgement is really due to Mr. Mohammed Ali Mustafa for his current great work.

March 1982

Dr. Mua'yad Sa'id Demirji
President of the Organization

PREFACE

Two prominent and contrasting phenomena are evident in the rich archaeological record of the culture and civilization of Iraq. First, there are many examples of creative innovations and advances in the various cultural, technical, scientific, and artistic fields, which have been fundamental in the development of modern civilization; and secondly, there is a strong thread of continuity which runs throughout the past of Iraq. Both of these characteristics are found in the results of our excavations at Eridu.

Eridu was one of the first centres of civilization in southern Mesopotamia and in its earliest phase was distinguished by a type of painted pottery otherwise unknown except for some unstratified sherds, from Ur and 'Usaila near Eridu. The steady development of this civilization is demonstrated by the repeated rebuilding of temples in the same place throughout the prehistoric period. The sequence of plans recovered from the Temple Sounding starting as a simple one-roomed shrine in Level XVII just above virgin soil and ending as a huge and elaborate temple of the protoliterate period in Level I provides a vivid illustration of the evolution of religious architecture in Mesopotamia. Nowhere else has such a complete architectural and ceramic sequence been recovered for this period.

This volume describes the results of the excavations carried out by the State Organization of Antiquities and Heritage during the years 1946 to 1949 and offers a preliminary and simplified picture of the prehistory and history of Eridu, which undoubtedly will be modified when further excavations are undertaken on this rich and rewarding site. We hope that archaeologists and others interested in the ancient culture and civilization of Mesopotamia will be stimulated to comment on the evidence and revise the hypotheses which we have presented in this book and that they will carry out further research into these problems.

The long delay between the conclusion of the excavations and the publication of this report was the result of many obstacles and difficulties. These have been overcome through the encouragement and support of the Ministry of Culture and Information to which we are extremely grateful.

It is also a pleasure to record our sincere thanks and appreciation to the State Organization of Antiquities and Heritage and, in particular, to its President Dr. Muayad Saeed Damirji for undertaking the publication of this book.

It is necessary for the sake of honesty to stress the important contribution made to this report by my two colleagues the late Professor Fuad Safar and Professor Seton Lloyd. They shared with me the arduous work of the excavations at Eridu from the start of the project until the completion of the writing of the text.

Acknowledgement is also due to all those who have taken part, in one way or another, in the preparation and editing of this book, particularly Mr. Ali Mohammed Mehdi, Mrs. Shatha Fuad Safar, Mrs. Suad al-Abbasi, Dr. Michael Roaf for his effort in the linguistic review and in the compilation of the index, and Mr. Sameer Dhahir al-Sarraf for supervising the printing and technical execution.

We hope that this book will fill the gap which has for some years existed in the archaeological literature and would like to draw the readers' attention to the fact that an enlarged comprehensive report on Eridu written in Arabic is in preparation: this will contain in addition to the results of the excavations a detailed review of the development of religious and secular architecture in Mesopotamia from the early fifth millennium B.C. up to the end of the Early Dynastic period.

Finally, I hope that in this report we have been able to make a useful contribution to the understanding and evaluation of the heritage of our Nation and its immortal civilization.

Mohammed Ali Mustafa

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Colour Plates

PLATE 1

1. IM. 55023 — Cup, painted in dark brown with geometrical design conical shape, egg-shell ware, 12 x 3.5 cm (Eridu).
2. IM. 54833 — Dish shallow, painted in black with geometrical design, 19.5 x 4.5 cm (Eridu Temple XVI/XVII).
3. IM. 54835 — Shallow dish, oval shape, painted in brown with geometrical design, 20 x 5 cm (Eridu Temple XVII).

4. IM. 54834 — Vase, cylindrical shape, painted in black with geometrical design, 12.5 x 8.5 cm (Eridu Temple XVI)

PLATE 5

1. IM. 54835 — Vase, cylindrical shape, painted in black with geometrical design, 12.5 x 8.5 cm (Eridu Temple XVI)
2. IM. 54836 — Cup, painted in black with geometrical design, conical shape, 12.5 x 3.5 cm (Eridu Temple XVI)
3. IM. 54837 — Cup, egg-shell ware, conical shape, painted in black with geometrical design, 12.5 x 3.5 cm (Eridu Temple XVI)
4. IM. 54838 — Cup, egg-shell ware, conical shape, painted in black with geometrical design, 12.5 x 3.5 cm (Eridu Temple XVI)

PLATE 8

1. IM. 54839 — Dish, shallow, painted in black with geometrical design, 19.5 x 4.5 cm (Eridu Temple XVI)
2. IM. 55017 — Iron vase, 20 x 5 cm (Eridu)
3. IM. 55018 — Cup, painted in black with geometrical design, 12.5 x 3.5 cm (Eridu Temple XVI)
4. IM. 54831 — Cup, egg-shell ware, conical shape, painted in dark brown with geometrical design, 12.5 x 3.5 cm (Eridu Temple XVI)

PLATE 9

1. IM. 54832 — Cup, painted in black with geometrical design, conical shape, 12.5 x 3.5 cm (Eridu Temple XVI)
2. IM. 54833 — Dish, shallow, painted in black with geometrical design, 19.5 x 4.5 cm (Eridu Temple XVI/XVII)
3. IM. 54834 — Cup, painted in black with geometrical design, conical shape, 12.5 x 3.5 cm (Eridu Temple XVI)
4. IM. 54835 — Shallow dish, oval shape, painted in brown with geometrical design, 20 x 5 cm (Eridu Temple XVII)

4. IM. 54824 — Vessel, cylindrical shape, painted in black with geometrical design, 15.0 X 8.2 cm (Eridu Temple 16).

PLATE 2

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3. IM. 54822 — Cup, egg-shell, conical shape, painted in chocolate with geometrical design, Ubaid period. 13.5 X 60. cm (Eridu Temple IX)
4. IM. 54823 — Cup, egg-shell ware, conical shape, painted in chocolate with geometrical design. Ubaid period. 5.0 X 1.15 cm (Eridu Temple IX).

PLATE 3

1. IM. 54889 — Dish, plain egg-shell ware shallow shape. Ubaid period. 21. 3 X 5.8 cm (Eridu).
2. IM. 55017 — Incense cover. 29.5 X 28 cm (Eridu).
3. IM. 55013 — Cup, painted in black with geometrical design, hemispherical shape. 10.6 X 5 cm (Eridu, Temple VII).
4. IM. 54821 — Cup, egg-shell ware, conical shape, painted in dark brown with geometrical design. 6.0 X 12.3 cm (Eridu Temple IX) Ubaid period.

PLATE 4

1. IM. 54863 — Dish, shallow, with geometrical design in brown paint. Ubaid period. 22 x 5.2cm (Eridu, grave 162).
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PLATE 5

1. IM. 54840 — Dish, hemispherical shape, painted in black with geometrical design. Ubaid period. 25 X 7.5 cm (Eridu, grave 82).
2. IM. 54852 — Dish, shallow, painted in black with wavy Lines Ubaid period. 23x5.0 cm (Eridu, grave 159).
3. IM. 54784 — Cup, demi-conical shape, painted in dark brown with floral design. Ubaid period. 10.5 X 15.6 cm. (Eridu, 128).
4. IM. 54810 — Jar, conical shape, geometrical design, brown paint. Ubaid period. 10.5 X 8.5 cm (Eridu, grave 169).

PLATE 6

1. IM. 54741 — Jug, painted in black with geometrical design. 20 X 16.5 cm (Eridu, grave 109).
2. IM. 54813 — Jar, oval shape, painted in chocolate with geometrical design. Ubaid period. 21 X 28 cm. (Eridu Ubaid's settlement).
3. IM. 55025 — Jar, spherical shape, painted in black with geometrical design. Ubaid period. 12 X 19.3 cm. (Eridu, Grave 3).
4. IM. 54811 — Jar, oval shape, painted in chocolate with geometrical design. Ubaid period. 15.3 x 11.3cm. (Eridu, grave 54).

PLATE 7

1. IM. 54790 — Cup, conical shape, painted in black with floral design. Ubaid period. 10.9 X 13.5 cm (Eridu, grave 152).
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4. IM. 54814 — Cup, painted in chocolate with floral

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PLATE 8

1. IM. 54795 — Cup, painted in black with linear bands. Ubaid period. 11.0 X 10.5 cm (Eridu, grave 190).
2. IM. 54794 — Cup, painted in black with geometrical design. Ubaid period. 10.5 X 9.8 cm (Eridu, grave 60).
3. IM. 54808 — Cup, hemispherical shape, painted in chocolate with geometrical design. Ubaid period. 10.5 X 16.5 cm (Eridu, grave 50).
4. IM. 54806 — Bowl, painted in brown with geometrical design. Ubaid period. 9.5 X 11.5 cm (Eridu, grave 129).

PLATE 9

1. IM. 54805 — Cup, painted in dark brown geometrical design. Ubaid period. 10.5 X 12.8 cm (Eridu, grave 53).
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3. IM. 54801 — Cup, painted in dark brown with geometrical design. Ubaid period. 11.7 X 1.0 cm (Eridu, grave 87).
4. IM. 54785 — Cup, painted in black with floral design. Ubaid period. 10.5 X 5.8 cm (Eridu, grave 132).

PLATE 10

1. IM. 14728 — Painted pot, complete. 14 X 10 cm (Arpachiyā).
2. IM. 14789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
3. IM. 14788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).
4. IM. 14804 — Painted vase. 14 X 12 cm (Arpachiyā).

PLATE 11

1. IM. 14793 — Painted tumbler. 12.5 X 11 cm. (Arpachiyā).
2. IM. 45075 — Painted pot, with black painted design; having lug handles. 25 X 15.3

PLATE 8

1. IM. 54810 — Cup, hemispherical shape, painted in chocolate with geometrical design. Ubaid period. 10.5 X 16.5 cm (Eridu, grave 50).
2. IM. 54822 — Cup, shallow, painted in black with wavy linear design. Ubaid period. 10.5 X 10.5 cm (Eridu, grave 129).
3. IM. 54794 — Cup, hemispherical shape, painted in black with linear design. Ubaid period. 10.5 X 9.8 cm (Eridu, grave 60).
4. IM. 54810 — Cup, hemispherical shape, painted in chocolate with geometrical design. Ubaid period. 10.5 X 16.5 cm (Eridu, grave 50).

PLATE 9

1. IM. 54785 — Cup, painted in black with floral design. Ubaid period. 10.5 X 5.8 cm (Eridu, grave 132).
2. IM. 54813 — Cup, oval shape, painted in chocolate with geometrical design. Ubaid period. 9.5 X 19.5 cm (Eridu, grave 14).
3. IM. 54801 — Cup, painted in dark brown with geometrical design. Ubaid period. 11.7 X 1.0 cm (Eridu, grave 87).
4. IM. 54811 — Cup, oval shape, painted in chocolate with geometrical design. Ubaid period. 10.5 X 11.7 cm (Eridu, grave 132).

PLATE 10

1. IM. 54789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
2. IM. 54788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).
3. IM. 54789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
4. IM. 54788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).
5. IM. 54789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
6. IM. 54788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).
7. IM. 54789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
8. IM. 54788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).
9. IM. 54789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiyā).
10. IM. 54788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiyā).

cm. (Arpachiya, surface find).

3. IM. 26662 — Jar, painted, badly broken. 51.2 X 55.2 X 51.3 cm. (Tepe Gawra).
4. IM. 32661 — Jar, black painted, brown ware, buff slip. 15.0 X 17.5 cm (Tepe Gawra).

PLATE 12

1. IM. 20855 — Bowl, fragments, painted, 19 X 17 X 5 cm. (Tepe Gawra).
2. IM. 60773 — Bowl, spheroid shape, painted in black. 147 X 95 cm. (Teloul Thalathat).
3. IM. 60728 — Jar, painted in black with plain band over wavy line, green ware. 17.0x 16.0cm. (Teloul Thalathat).
4. IM. 60133 — Dish, hemispherical shape, painted in dark-brown. 9.0 x 27.5 cm. (Kamarian L. 6).

PLATE 13

1. IM. 22464 — Large plate, painted in black with exception of bottom. 35.5 X 10 cm. (Al-Ubaid).
2. IM. 8587 — Bowl, painted rim and inside. 24 X 7.5 cm. (Al-Ubaid).
3. IM. 8585 — Bowl, rim painted black, incised decoration. 21.5 X 8 cm. (Al-Ubaid).
4. IM. 8555 — Painted cup. 10.5 X 10 cm. (Al-Ubaid).

PLATE 14

1. IM. 8578 — Painted pot. 9 X 21 cm. (Ur).
2. IM. 285?? — Jar, drab clay, greenish, wheel made. 15 cm. high. (Ur).
3. IM. 498 — Pot, painted in black with geometrical design Ubaid period. 14 cm. high (Ubaid).
4. IM. 8580 — Painted bowl. 13 X 10 cm (Ur, Telloh).

PLATE 15

1. IM. 319 — Deep bowl, brown paint buff ware, flat base. Site? Size?
2. IM. 8579 — Painted tumbler. 10 X 18.5 cm. (Ur).
3. IM. 284 — Jar, green clay, roughly. 16 cm. high (Ur).

IM. 26662 — Jar, painted, badly broken. 51.2 X 55.2 X 51.3 cm. (Tepe Gawra).

IM. 32661 — Jar, black painted, brown ware, buff slip. 15.0 X 17.5 cm (Tepe Gawra).

IM. 20855 — Bowl, fragments, painted, 19 X 17 X 5 cm. (Tepe Gawra).

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IM. 319 — Deep bowl, brown paint buff ware, flat base. Site? Size?

IM. 8579 — Painted tumbler. 10 X 18.5 cm. (Ur).

IM. 284 — Jar, green clay, roughly. 16 cm. high (Ur).

4. IM. 8582 — Painted bowl. 14 X 11 cm. (Ur, Telloh

PLATE 16

1. IM. 47820 — Bowl, Ubaid ware, painted in black (Room G, street IV No. 27 Uqair). 9 x 14.2 cm.
2. IM. 47826 — Small cup with black painted. (Ubaid house, Room G, street IV, 119, Uqair). 8 X 8.4 cm.
3. IM. 47819 — Bowl, typical, Al Ubaid type, black painted design, thin ware, Ubaid house, level I, street IV No. 61 Uqair. 9 X 13.7 cm.
4. IM. 47823 — Dish, with painted design in black. Rough ware. (Ubaid house, street IV No. 88 Uqair). 21.5 X 10.0 cm.

PLATE 17

1. IM. 47793 — Large Urn, typical Ubaid period. (Ubaid house, Level I street IV No. 58 Uqair). 25 x 27 cm.
2. IM. 47821 — Bowl, Ubaid ware, painted in black. (Room C, street IV No. 66 Uqair). 8 X 9 cm.
3. IM. 47827 — Cup with conical shape, and black painted design. (Ubaid house level I street IV, No. 121 Uqair).
4. IM. 47828 — Urn, black painted design. Ubaid ware. (Ubaid house, level I, street IV, No. 108 Uqair). 13.5 X 11.0 cm.

PLATE 18

1. IM. 47794 — Jug, Ubaid period. (Debris of level III of Ubaid trench street IV No. 30 Uqair). 30 X 52 cm.
2. IM. 54827 — Vessel, cylindrical shape, painted in chocolate. Ubaid period, Eridu Temple XVI? 13.5 x 8.8 cm.
3. IM. 63954 — Small Jar, painted in black with geometrical design. (Ras al-Amiya). 7 X 7.5 cm.
4. IM. 63957 — Bowl, painted with floral design of brown colour. (Ras al-Amiya). 11.3 x 21.7 cm.

PLATE 19

1. Painted sherds from Temple VI.
2. Painted sherds from Temple VII.
3. Painted sherds from Temple VIII.
4. Painted sherds from Temple IX.

PLATE 20

1. Painted sherds from Temple X.
2. Painted sherds from Temple XI.
3. Painted sherds from Temple XII.
4. Painted sherds from Temple XIV.

PLATE 21

1. Painted sherds from Temple XVI.
2. Painted sherds from Temple XVII.
3. Painted sherds from Temples XVIII-XIX.

PLATE 22

1. Painted sherds from Levels I and II Hut Sounding
2. Painted sherds from level III Hut Sounding
3. Painted sherds from level IV Hut Sounding
4. Painted sherds from level V Hut Sounding

PLATE 23

1. Painted sherds from level VI Hut Sounding
2. Painted sherds from level VII Hut Sounding
3. Painted sherds from level VIII Hut Sounding
4. Painted sherds from level IX Hut Sounding

(including some painted sherds of Qal'at Hajji Muhammad type this level is a hiatus level most probably cut from the original Eridu Mound to make a terrace for level 8 in the Hut Sounding.

PLATE 24

1. Painted sherds of the Qal'at Hajji Muhammad type from the Site Qal'at Hajji Muhammad.
2. Painted sherds of the Qal'at Hajji Muhammad type from the site of Ras al-Amiya.
3. Ubaid painted sherds from the site Tell Abada (Himrin Dam project).
4. Ubaid painted sherds from the site Tell Abada (Himrin Dam project).
5. Samples of Uruk Gray and Red ware.

PLATE 19

- 1 Painted shards from Temple VI
- 2 Painted shards from Temple VII
- 3 Painted shards from Temple VIII
- 4 Painted shards from Temple IX

PLATE 20

- 1 Painted shards from Temple X
- 2 Painted shards from Temple XI
- 3 Painted shards from Temple XII
- 4 Painted shards from Temple XIV

PLATE 21

- 1 Painted shards from Temple XVI
- 2 Painted shards from Temple XVII
- 3 Painted shards from Temple XVIII-XX

PLATE 22

- 1 Painted shards from Level I and the bounding
- 2 Painted shards from level II and the bounding
- 3 Painted shards from level III and the bounding
- 4 Painted shards from level IV and the bounding

PLATE 23

- 1 Painted shards from level V and the bounding
- 2 Painted shards from level VI and the bounding
- 3 Painted shards from level VII and the bounding
- 4 Painted shards from level VIII and the bounding

Shards were found in the level of the bounding
 and the level of the bounding. The shards were
 probably cut from the original level of the bounding
 and the level of the bounding.

PLATE 24

- 1 Painted shards of the Dalat High Mountain
- 2 Painted shards of the Dalat High Mountain
- 3 Painted shards of the Dalat High Mountain
- 4 Painted shards of the Dalat High Mountain
- 5 Painted shards of the Dalat High Mountain

ABBREVIATIONS

A.F.O.	Archiv für Orientforschung
B.A.S.O.R.	Bulletin of the American Schools of Oriental Research
Delougaz	P. Delougaz, Pottery from the Diyala Region (Oriental Institute Publication, Chicago, 1952).
H.M.	Qal'at Hajj Mohammed
IM.	Iraq Museum registration number
J.N.E.S.	Journal of Near Eastern Studies
O.I.C.	Oriental Institute Communications, University of Chicago.
Q.H.M.	Qal'at Hajj Mohammed
U.V.B.	Vorläufiger Bericht über die von der Deutschen Forschungsgemeinschaft in Uruk-Warka unternommenen Ausgrabungen.

CHAPTER 1
INTRODUCTORY

INTRODUCTORY

A. The Eridu Expedition

The possibilities of ancient Eridu as a site for excavation, first came under discussion in our own journal *Sumer* of 1945⁽¹⁾. Its selection a year later for large-scale excavation by the Directorate General of Antiquities was due to the good judgment of the Director-general of Antiquities, H.E. Dr. Najī al Asil, whose continued interest and encouragement subsequently did much to ensure the success of the work.

Preparations for the expedition, including the erection of quarters for the staff and the levelling of a cart-track from Ur-Junction, were undertaken by Sayyid Mohammed Ali Mustafa, who subsequently served as surveyor and supervisor of excavations during the 1st and 3rd seasons. Access to the site, which had promised to present a major difficulty, owing to the softness of the soil in the Abu Shahrein "depression", was, in the end, greatly facilitated by the discovery of a causeway prepared for a road, whose construction had apparently been abandoned at the outbreak of war in 1939, and which, crossing the depression in a southwesterly direction, passed within a few kilometres of the mound. When a track had been constructed, connecting the site with the nearest point on this causeway, the railway station at Ur was brought within an easy one-hour drive by lorry, except after heavy rain, when the road would for some time become completely impassable.

The problem of finding material for the construction of the expedition house also presented some initial difficulty, since sufficient broken brick did not exist at the site, and the soil adjoining the mound was in certain ways unsuitable for making *liben* bricks. It was eventually decided to demolish the surviving ruins of Leonard Woolley's expedition house at Tell Muqayyar (Ur), and to re-utilize the material of which it was built. It is somewhat

The location and dimensions of the site.

The site was excavated in 1946 and 1947. The excavations were conducted by Sayyid Fuad Safar, assisted by Sayyid Mohammed Ali Mustafa. The site was excavated in 1946 and 1947. The excavations were conducted by Sayyid Fuad Safar, assisted by Sayyid Mohammed Ali Mustafa. The site was excavated in 1946 and 1947. The excavations were conducted by Sayyid Fuad Safar, assisted by Sayyid Mohammed Ali Mustafa.

important to mention here that this material consisted to a large extent of inscribed bricks from the temple-buildings at Ur, in order that the presence of such bricks at Tell Abu Shahrein, may not, in future time, prove confusing to archaeologists or other visitors. In any case, the sound structure provided by the use of this material, proved indispensable during the violent dust-storms and spells of bitterly cold weather, to which the excavating staff have continually been subjected. Most of the complete bricks of this house were transferred to Ur in 1962 to be used in the restorational work, according to its stamped inscriptions.

Sayyid Fuad Safar took over as Field Director at the beginning of December 1946, his staff consisting of Dr. Faraj Basmaji, Dr. Mahmud al Amin, and Sayyid Sabri Dhiweibi, as camp-manager. Excavations actually began on 24 December 1946, and the first season lasted until mid-March 1947. The second season began in the fourth week of November 1947, and continued until mid-March 1948. Sayyid Fuad continued as Director of Excavations, he was again assisted by Dr. and Mrs. Mahmud al-Amin, but Sayyid Mohammed Ali, having been prevented by illhealth from joining the party, his place was taken as surveyor by Sayyid Izz-ad-Din as-Sanduk. After the discovery of the Al'Ubad cemetery in January 1948, Sayyid Akram Shukri, Director of the Iraq Museum Laboratory, joined the expedition, and with his assistant, Sayyid Yusuf Hannah, did excellent work on the waxing and removal of skeletons. Throughout the first two seasons, the work was subject to the general advice of Mr. Seton Lloyd F.S.A., technical adviser to the Department.

The third season of work began at the end of November 1948 and continued to the end of February 1949. It was also conducted by Sayyid Fuad Safar, assisted by Sayyid Mohammed Ali Mustafa who was responsible for surveying and architectural work, and Sayyid Sabri Dhiwaibi as camp-manager.

1. "Sumer" vol. I, No. 2 (1945), P. 4-8

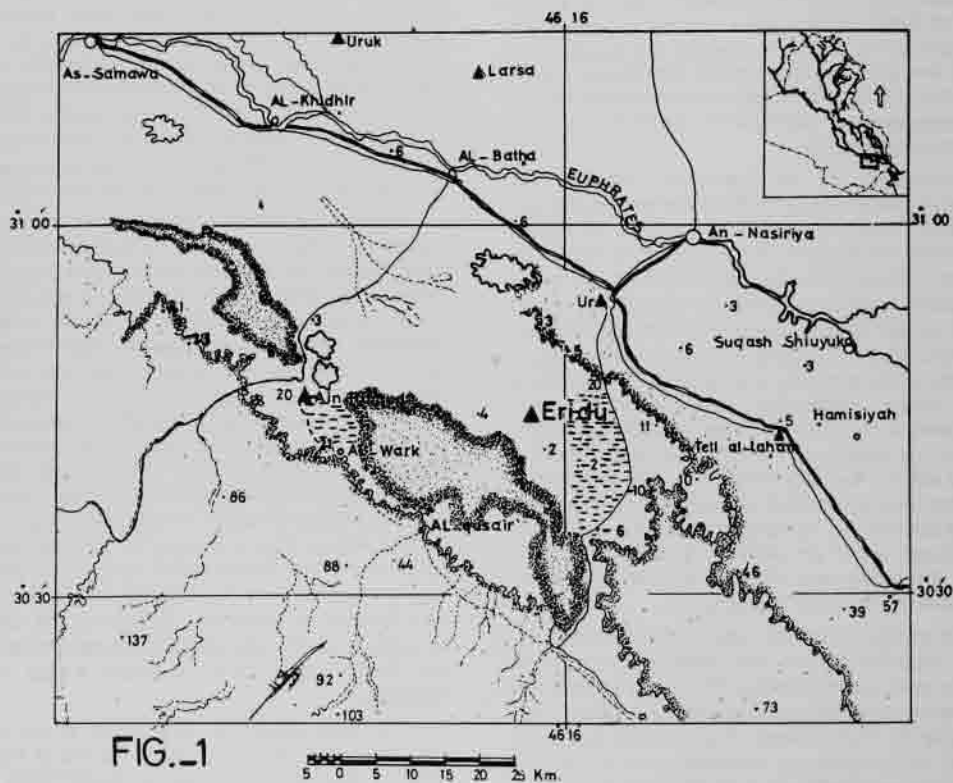
B. The Location and Surroundings of Abu Shahrein

Tell Abu Shahrein is situated at about 24 Kms, to the SSW of Ur, in an irregular depression which extends generally from NW to SE, and is confined in the east by the ridge Al-Hazim, which runs in the same direction, half-way between Ur and Eridu. In the west and south, the depression is limited by the edges of the rising plateau of the Arabian desert.

The nearest present town to Abu Shahrein is an-Nasiriya which is 40 Kms to the northeast, situated on

both banks of the Euphrates, at a level of about 3 m. above the sea while there are in the depression certain places to the SE of Eridu at 8.5 m. below the sea level (Fig. 1).

The alluvial land in the depression is at present partly covered with extensive salty patches and sporadic sand dunes. Yet there are traces of furrows of plow in a fairly large area in the neighbourhood of the mound, but it is of undeterminable date. The results of excavation on the main mound and the soundings made at the smaller mounds in the neighbourhood indicate that the area was



inhabited continuously from the earliest known cultural period in Southern Iraq namely the Eridu phase of culture (sixth millennium B.C.) down to approximately the end of the Achaemenid period (4th century B.C.).

The Site Map in Fig. 2 shows the location of the following mounds of which the settlement moved in various periods: Mound No. 1. The earliest settlement occurs at the proper mound of Abu Shahrein, the acropolis (Fig. 3) which is almost round 580 × 540 m. stretching slightly from NW to SE, and rising at the top of its ziggurat 25 m. above the plain, while its surface which

rises only about 11 m. is oblong 220 × 180 m. with a projection at its northeastern side, roughly square in shape 40 × 50 m. The side is richly covered with Ubaid potsherds indicating that it was a large Ubaid settlement and for a long time. In Uruk period it became a temple site with the dwellings moved probably in the middle of that period to the North Mound no. 2.

Mound no. 2. The North Mound is situated exactly to the north of Tell Abu Shahrein, at a distance of one Km. (Fig. 2). It is round in shape, of a diameter of 350 m and a height of 4½ m.

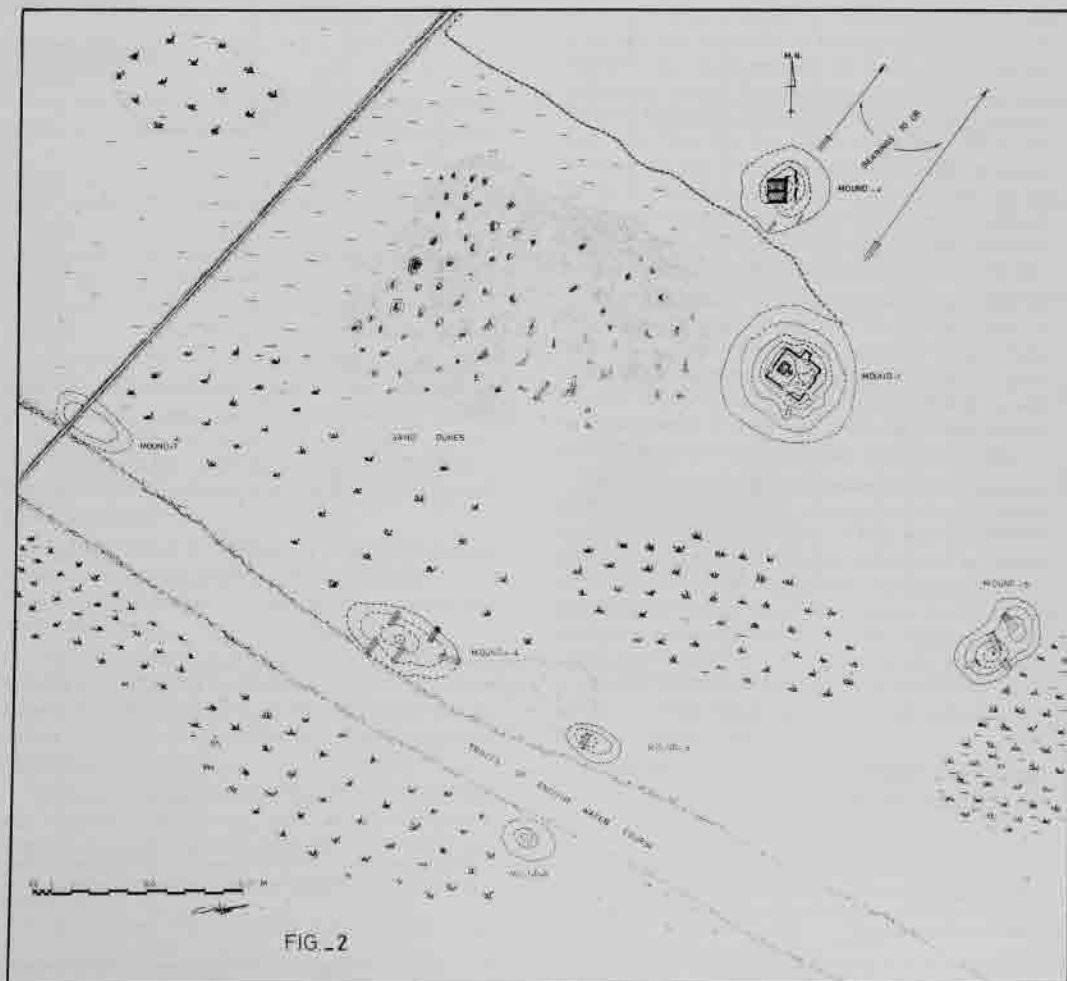


FIG. 2

The earliest settlement in this mound belongs to the middle Uruk period, and it continued to be inhabited to the end of the Early Dynastic period. It is possible that the settlement moved after the Ubaid period to this mound in order to avoid the sand blown from the dunes which are at present in the west of Tell Abu Shahrein.

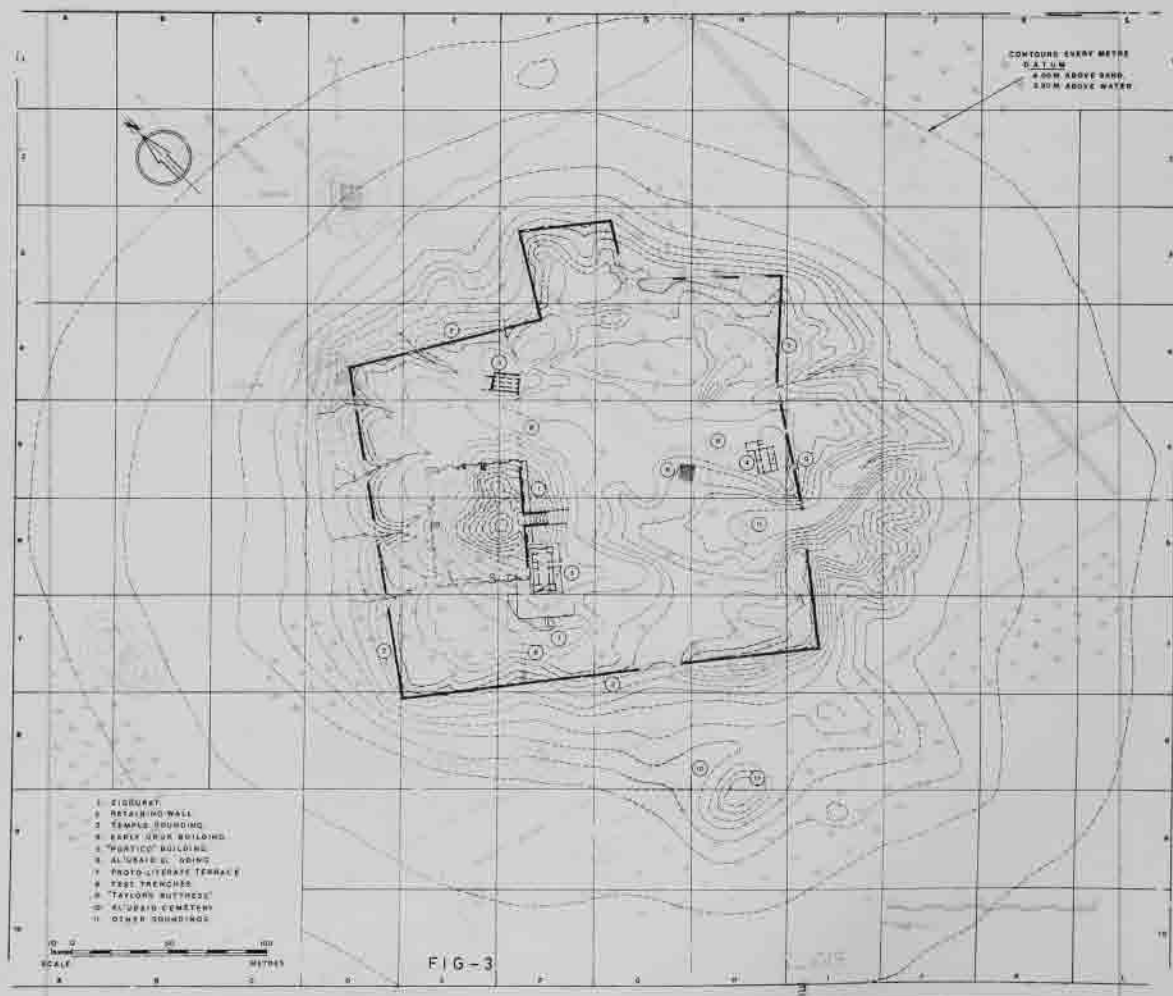
Mound no. 3. An oval small mound 300 x 150 m. and of a height of about 2.5 m. situated almost 2.2 Km. to the S of Abu Shahrein. At its summit a trench was sunk where pottery of Isin-Larsa period was encountered.

Mound no. 4. An oval shaped mound situated at 2.5 Kms. to the SW of Abu Shahrein. Five test trenches were

sunk and the results were generally Kassite pottery, among which long beakers with solid bases. This mound is about 600 m. long, and 300 m. wide, extending approximately from NW to SE on the edge of a wide water course identified by the colour of its bed and its slight depth.

Mound no. 5. An oval mound 500 m. long, 300 m. wide, extending from NE to SW. It has two summits the highest is 3 m. above the plain. Four test trenches were dug, which fixed the date of the settlement to Neo-Babylonian and Achaemenid periods.

Mound no. 6. 300 x 200 m. and a height of 2 m. is



not tested. It is on the south edge of the water course opposite to mound no. 3.

Mound no. 7. 400 × 200 m. and a height of 1½ m. crossed by the track which was made after the Second World War for crossing the depression of Eridu.

Site no. 8. Is a flat patch of land on which are Eridu phase sherds scattered, situated at present in a shallow depression where rain water accumulates, and hence shrubs grow here, and water could easily be secured from pits dug by bedouins. For this reason it is called 'Usalla, meaning sweet water, and although it is actually brackish nevertheless better than other places in the vicinity. This site is situated to the west of Abu Shahrein at about 5-6 Kms.

C. Eridu in History

In the Sumerian literature Eridu was on the sea shore, at least in the time of Shulgi (2033-1988 B.C.) king of Ur, according to the following cuneiform chronicle: "Shulgi the son of Ur-Nammu cared greatly for the city of Eridu, which was on the shore of the sea". But was Eridu actually on the shore of the sea or was it on the shore of a great marsh formed by the floods of the Euphrates similar to Bahr ad-Dibis to the west of Karbala, or Hor al Hammar to the east of Suq al-Shuyukh? Was the sea of Shulgi a mass of water regardless whether marine or fresh water?

Campbell Thompson's following statement has a bearing on these raised questions: "I think that the fresh water mussel shells which I found in great quantity in different strata, when taken into consideration with the very few finds of marine shells, will definitely compel us to give up the idea that Eridu was in ancient times actually on the sea-shore"⁽²⁾.

The conclusion of Thompson is confirmed by the fact that the main temple at Eridu was called E-Apsu i.e. the temple of Apsu or near by Apsu which is, the primeval fresh water ocean.

Nevertheless the possibility that the sea shore was near by Eridu could not be excluded, since the geologists believe that the sea level in the climatic optimum in the middle of the fourth millennium B.C. was three metres higher than at present⁽³⁾.

Unfortunately we could not find the sea level of Tell Abu Shahrein or of the plain in its immediate neighbourhood on the maps available to us. But on the

map of Salman-Busaiya, scale 1/500000 which was compiled and drawn by the British war office in 1933 and printed in 1940, are sea level measurements of several points inside the depression, showing that the land to the south east and south of Abu Shahrein slopes down astonishingly to a maximum depth of approximately 29 feet below the present sea level. According to this map there is no cut in the high ridges surrounding the depression from the east and south-east to let the flooding water of the marshes of Suq-ash-Shuyukh to enter the depression. But the sea in its climatic optimum of three metres higher than at present, could probably just enter the depression by an opening at the Ridge of al Hazm to the west of Ur which is at present only about 9 feet above sea level, (the 3 m. rise are observed on Mauritanian and Australian shores⁽⁴⁾). But more probably the water which filled the depression forming the great lagoons (Apsu) was fresh from the Euphrates ever existing at the head of Arabian Gulf. How long that rise of the three metres continued is not known, but at Eridu the settlement which appeared for the first time outside Tell Abu Shahrein, in the plain (in the Palace Sounding at the North Mound) in the middle of Uruk period in about 3300 B.C., may indicate that there was no more the threat of high water to the nearby plain.

The depression itself extends and slopes from the NW to SE, beginning probably somewhere south of Samawa, where there is still seasonal swamp, and continuing in the same direction down from Eridu to about 20 Km (Fig. 1). Neither the geomorphological and tectonical history of the region of this depression, nor the geological soil are studied enough to reveal its past.

There are certain religious texts which have bearings on the topography of Eridu, among which are the Adapa Myth, and the creation of Eridu. Adapa was a legendary hero who lived at Eridu. He was master baker and fished for the city. Once the southeastern wind sank him with a sudden blow. He laid hold of the wind and broke his wing, so that he never flew again. This myth mentions that the southeastern wind Shu-u-tu blew on the land where Eridu is situated, and that Adapa sailed from the new moon harbour at Eridu, indicating that there was mass of water to the southeast of the city.

According to the legend of creation (the version found at Sippar), the city of Eridu was the first to be created, and when all the land was sea.

2. Campbell Thompson "The British Museum Excavations at Abu Shahrein", P. 124

3. Werner Nutzel. "The Arabian Gulf", Sumer, vol. XXXI, P. 105.

4. Werner Nutzel, The Climatic optimum in other shores namely Caucasian and Pontic was five metres above the present sea level.

"A reed had not come forth, a tree had not been created.

"A house had not been made,

"A city had not been made,

All the lands were sea.

"Then Eridu was made.⁽⁵⁾

Eridu is written in various forms but the most common is NUN^{ki} which literally means, the city of the tree, but figuratively NUN^{ki} means, great or prince, and may originally be a picture of a palm tree. Nevertheless the meaning of Eridu is unknown and it is one of the many prehistoric geographical names which had undergone transformations before the beginning of writing, and consequently their original meanings are lost. If it were Semitic it would mean low or the low city. It is written also as Eri-Dug with the meaning, the good city, and later as Al Hi⁽⁶⁾.

The chief god of Eridu is Enki the god of exceptional wisdom and strength who became the god of the subterranean sweet waters. He is known also by the names of Nudimmud and Ea in the legend of creation and it was he who saved the lives of the young gods by slaying the father of all gods, Apsu, and establishing on his slain body his spacious abode which he named also Apsu, that is the name of the Temple at Eridu.

Since Enki gained his authority or power inherent in the spoken word, the magic of the spell, Eridu was considered as the city of magic sorcery.

Enki is the father of Marduk who was reared in the temple of Apsu at Eridu, and who became the strongest among gods after killing Tiamat the mother of all gods and creating the universe. Under his second name, Ea, he was the most famous god among the Sealanders and the Aramaeans of later times.

The name of the ziggurat at Eridu occurs as E-U in a geographical list and in another inscription as E-U-NIR⁽⁷⁾.

Eridu seems to have had no political significance and was never a seat of a ruling dynasty, except for the first two legendary kings before the Deluge, Alalum and Alagar, each ruled according to the king list, thousands of years. Even these, according to a historical document found at Larsa ruled at the city Shubaru. One of the earliest references to Eridu belongs to Uj-Nanshe the

founder of the Dynasty of Lagash in the middle of the 3rd millennium B.C. Entemena one of the Kings of this dynasty claims to built the temple of Apsu to Enki the chief god of Eridu. Three centuries later Gudea's influence reached Eridu in which he deposited temporarily the statue of Mingirsu, until he prepared his abode at Lagash.

At the time of the Third Dynasty of Ur, Eridu was greatly taken care of. Ur-Nammu dug a canal named Idi gu-bi from the Euphrates to Eridu, by which he brought fresh water, indicating that it was no more available. He also started on building its ziggurat, but it was left to his grandson Amar-Sin to finish it.

Eridu became under the control of the kings of Isin, among whom Ishme-Dagan and Libit-Ishtar claim to have done some constructions in the city. Later it became under the hegemony of the city of Larsa according to the inscriptions of its kings Sin-Idinam, Nur-Adad, Warad-Sin and Rim-Sin.

Of this Isin-Larsa period there is no definite archaeological evidence for constructional work at Eridu, except one single evidence namely a stamped brick of Nur-Adad, in which he claims to have done great reconstructions. To this period may also belong the oblong baked bricks stamped with two crescents, found in the encasement of the ziggurat and also in the structure of the retaining wall of the city.

Nabu-Kudurri-Ussur I (1136-1113 B.C.) king of the Second Dynasty of Isin called himself on a kuduru stone the "Shakkanak of the city of Eridu". On another kuduru stone Shamash-Shipak, the founder of the 2nd Dynasty of the Sealanders, tells us that he in 1026 B.C. installed Eamukinzeri a priest at Eridu. Three hundred years later the city was still existing. It is mentioned in the records of the Assyrian kings Sargon and his son Sennacherib⁽⁸⁾. In the revolts of the Babylonian cities against the latter king, Eridu participated. In the records of Nebuchadnezzar II and also Nabunaid, men from Eridu are mentioned. The brick of the former found at Eridu indicates that he constructed or built in it.

D. Previous Excavations at Tell Abu Shahrein

Small scale excavations at Tell Abu Shahrein have been undertaken in the past on three separate occasions. First attempt was made in 1854 by J.E. Taylor, on behalf of the British Museum. His report⁽⁹⁾ shows evidence of a

5. Alexander Heidel, *The Babylonian Genesis* (1951) P. 62

6. Unger, "Eridu" in the *Reallexikon der Assyriologie*. Baghdad II (1933) P. 464-470 para 3.

7. *ibid*, para 11

8. *ibid*, para 4

9. Taylor "Notes on Abu Shahrein and Tel al-Lahm" in *Journal of the Royal Asiatic Society* Vol. XV (1855) PP. 404-415.

certain sense of disappointment, in that his expectations of finding temples and palaces, with sculpture and inscriptions, had not been realized.

Taylor dug a score or so of trenches, and his consequent discoveries may be summarised as follows:

1. He encountered the outer, stone retaining wall of the acropolis at several points.

2. He discovered and cleared the vertical water drain, which is constructed and re-constructed in the baked bricks of two different periods against the retaining wall in Sq. 5/1 of the site plan (Fig. 2) presumably to draw off water from neighbouring buildings. This structure came to be called Taylor's Buttress.

3. Just south of the ziggurat, he discovered and drew a section of a heavy stone structure, which he rightly took to be the revetment of a platform. This was actually the extension of the platform of our Temple II.

4. Buried at the base of the axial staircase, he discovered a base of a column, composed of alternate laminations of limestone, and rows of coloured mosaic-cones.

5. In the south and west corners of the site, he excavated several chambers of buildings, constructed of sun dried bricks, with a facing of mud plaster. In one of them he detected on the walls, "...the figure of a man holding a bird on his wrist, with a smaller figure near him, in red paint". But he adds: "the whole painting and design was of extremely rude execution". Now we know that these buildings belong to early phase of Uruk period.

6. He discovered and marked on his site-map a statue of a lion in black granite lying on the surface outside the retaining-wall on the northeast side.

In 1918, just before the conclusion of the First World War, Campbell Thompson began his excavations at Tell Abu Shahrein which lasted only three weeks from April 10 till May 8⁽¹⁰⁾. Instead of using the well-tryed technique perfected by the German excavators at Babylon, he followed the precedent which Taylor had set over half a century before, in digging a succession of small trenches, and pits all over the site. One may perhaps be permitted some regret that his excavations produced almost nothing which Taylor had not already found, or which could not have been deduced from a further examination of the mound's surface. On the other hand, his geological

observations concerning the situation of Abu Shahrein, and geographical notes on the surrounding district, are accurate and helpful. While his resume of Eridu's history, as known from the epigraphic sources available at that time, is also a useful contribution.

Campbell Thompson's work at Abu Shahrein was resumed in the following year by H. R. Hall, also on behalf of the British Museum. He excavated from 21 April until 8 May 1919⁽¹¹⁾. Hall's intention was to find buildings, and he concentrated on an area at the easternmost corner of the site, and having found the tops of walls beneath the surface, proceeded to clear and examine a succession of chambers and "streets". These again are recognized as buildings of the early Uruk period, such as those in which Taylor had found his wall-paintings. They form part of complex, which includes the building excavated by ourselves in Square H/5. Like ourselves Hall found rooms with formal niches, windows and doors, some with flat lintels over them still intact. Hall⁽¹²⁾ foreshadowed the theory, now generally accepted, that, at least after the end of the third millennium B. C., Eridu was represented by the main mound at Abu Shahrein, and could not be considered as an inhabited city. He says "was the ancient Eridu, the Ziggurat, temple and Sumerian town, uninhabited after the Third millennium B.C. save by a few priests and anolytes? Did it survive merely as a sort of Babylonian cathedral close, with perhaps a later town, not yet discovered near-by?"

In regard to the "lion in black granite", which Taylor had recorded seeing on the surface, Thompson had told a story of an attempt to remove it, in about 1910. At the same time he published a photograph, showing a large, but badly weathered fragment of a similar lion, without reference in the text to its whereabouts. Hall describes and correctly locates this fragment on the surface of a subsidiary mound, which he wrongly calls Sulebiyah, at a mile to the east of the main mound. He could not find the intact figure which Taylor had seen.

E. Initial Inferences

The decision of the Directorate General of Antiquities, to excavate Tell Abu Shahrein on a fairly large scale, was prompted by inferences made from the combined evidence of previous excavation reports, and of

10. Campbell Thompson, "The British Museum Excavations at Abu Shahrein in Mesopotamia in 1918, in *Archaeologia*, Vol. LXX (1920) PP. 101-145.

11. An account of his excavations was included in his book, *A Season's Work at Ur* (1930).

12. *Sumer*; Vol. I No. 2 1945

textual references to Eridu in Mesopotamian literature. These were discussed at some length in an early number of *Sumer*¹³ and afterwards summarised in our first Interim Report in the same journal¹⁴. They may be briefly stated as follows:

1) Eridu, being the most ancient and important shrine of Ea-Enki, as well as the seat of a famous oracle, we should expect to find a Sumerian temple-library, or, at least, groups of tablets, connected with a centre of theological study.

2) Being the only site in southern Iraq, where there appears to have been a plentiful supply of **stone**, finds should include an abundance of sculpture, and unique architectural ornament, including the stone mosaics, examples of which had been found on the surface¹⁵.

3) Taylor appeared to have uncovered wall-paintings, probably of the Uruk period. These suggested the existence of buildings resembling the 'Painted Temple' at Tell 'Uqair.

4) The fourth inference was based on a theory, evolved during our early visits to the site, and elaborated in our discussion of the mound published in 1945. The argument, which may, we feel, be recapitulated here in full, was as follows:

"A large part of the finds which Campbell Thompson published, consisted of fragments of Al 'Ubaid painted pottery and other objects which we now familiarly associate with the earliest phase of prehistoric culture in south Iraq. Examining the mound in 1937, this was easily accounted for by the discovery of an Al 'Ubaid settlement, extending far beyond the limits of the later city on the eastern side.

"A more recent visit to both Abu Shahrein and Al'Ubaid in March 1945, has given rise to a new and important line of speculation in this latter connection, for the purpose of which we must first consider these two sites in comparison with a third, Tell 'Uqair, excavated by the Directorate General in 1940-1941.

"The striking similarity between 'Ubaid and 'Uqair was manifest from the first, each having the character of an important shrine, situated a few miles from a large and important city. (Tell 'Uqair stands in relation to Tell

ibrahim, the ancient Kuthah, exactly as Al'Ubaid to Ur). Each represents an extensive original settlement of the Al'Ubaid epoche, unoccupied during the subsequent phases of the prehistoric or proto-Sumerian period, except for repeated re-buildings of what must have been an original religious shrine, situated at one end of the settlement, and a cemetery, dating from the Early Dynasties. At Al'Ubaid it was of course a further rebuilding of the shrine, contemporarily with the cemetery, which yielded the famous architectural treasures to the late H.R. Hall in 1919. In the case of neither site has occasion yet been found to penetrate beneath the later re-buildings of the shrine, in search of their prototype of the Al'Ubaid period, though to the present writer, its existence in both cases seems beyond question¹⁶.

"At Al'Ubaid itself¹⁷, Leonard Woolley's investigation of the cemetery, and discovery of reed-huts, resulted in an impression of these earliest inhabitants of south Iraq as primitive marsh-dwellers still unversed in architecture. This has since been proved entirely erroneous, first by the contemporary 'Acropolis' at Tepe Gawra¹⁸ and the highly developed character of its group of temples, and secondly by the large and substantial secular buildings of sun-dried brick, found in the settlement at 'Uqair¹⁹, beneath which, six metres of earlier occupations showed the logical development of this material from pise.

"Let us now, therefore, examine the picture which presents itself of south Iraq in the so-called Al'Ubaid period, the earliest epoch of human habitation in the drying Mesopotamian delta. A province, almost exactly corresponding to the modern alluvium, is covered with prosperous settlements showing a characteristic and homogeneous culture. A similar, contemporary culture extends northwestwards to the Mediterranean, and a parent culture far into the Iranian Highlands. But unmistakable ceramic and other peculiarities already distinguish our province, which is to provide a setting for the evolution of Sumerian civilization. It is safe to assume that the focal-point of a settlement of any reasonable size, is a religious centre, whose character we must equate with the shrine at Tepe Gawra, simply because no example of such a building has yet been found within the province itself. With the birth of a political structure, and

13. *Sumer*, Vol. I, No. 2, 1945

14. *Sumer*, Vol. III, No. 2, 1947

15. See Figures 117 & 118

16. This suggestion was also made by Mr. C. J. GADD, after the excavations at Al'Ubaid were complete.

17. Hall & Woolley, *Ur Excavations I. Al'Ubaid*, Oxford, 1927

18. Reproduced in Delougaz & Lloyd, *Pre-Sargonic Temples in the Diyala Region*, Fig. 213, P. 310.

19. J.N.E.S. Vol. II, No. 2. Plate VI

the grouping of these settlements into city-states, some would increase in importance, until the ruins of the original settlement were buried deep beneath the accumulating architecture of a maturer community. So, Al'Ubaid settlements have been found, beneath the temples and palaces of Ur and Erech. Others, probably owing to the vicissitudes of irrigation, would not survive the ethnic disturbances which we connect with the names 'Uruk' and 'Jemdet Nasr'; but the pristine sanctity of their shrines would not be forgotten, and, conscientiously rebuilt by a succession of virtuous princes as in the case of the two sites under consideration, they would become objects to pilgrimage, and later cemeteries.

"And here, for us, is the new interest in Eridu. For the ruins as they stand, seem again to suggest the perpetuation, albeit on a grand scale, of a traditional

shrine. The mounds of Abu Shahrein could not represent the ruins of a city, in the sense of the greater Sumerian state-capitals, and no dynasty of princes rules there. The entire group of buildings leaves no room for common dwellings, and covers an area considerably less than that of the temple-enclosure at Ur. Yet, extending far beyond it, as at 'Ubaid and 'Uqair, is the undisturbed remains of an earlier settlement, whose shrine, perhaps still existing beneath the later temples, must have constituted the traditional basis of this holiest of Sumerian sanctuaries'.

How much of this speculation, in connection with Eridu, proved afterwards to be correct, may clearly be seen in the subsequent chapters of this report.

CHAPTER 2
EXCAVATIONS

EXCAVATIONS

A. Narrative of Excavations in Sequence of Time. The First Season 1946-1947.

After an exhaustive examination of the surface indications and conformation of the mound, it was decided that our first requirement was to test the stratigraphical connection between the base of the ziggurat and any buildings which we might be likely to find, directly beneath the surface in the higher part of the mound (Fig. 3). Starting from the eastern corner of the ziggurat in square F/5, we marked out a trench, two metres wide, running northeastwards across a fairly deep gully to the high ground beyond, where Campbell Thompson had recorded the remains of *liben* chambers. Work within the confines of this trench, at its northeastern end in Square F/4, brought us into contact with the 'portico' building of the early Uruk period, which was afterwards completely cleared. This excavation was extended to include fragmentary buildings, also of the Uruk period, beyond a minor gully to the east. The stratigraphical evidence of the trench was meanwhile recorded as accurately as the presence of the first gully permitted.

While this work was in progress, our attention was drawn to the area of the mound's surface immediately adjoining the southern corner of the ziggurat, and particularly to the projecting head of a limestone wall, which Taylor had partly excavated and Thompson had photographed. The line of this wall appeared to be parallel to the much-denuded southwest face of the ziggurat. Its outer face, which showed a slight 'batter' and was heavily plastered with gypsum, could easily be traced in a northwesterly direction, and we soon came to a rounded corner, where it turned at right-angles and continued northeastwards, up to the ziggurat. Built up against this face was a secondary terrace, also faced with limestone and plastered with gypsum, but having a curious stepped facade, constructed on a wavy line. Opposite the rounded

corner, we cleared a section of this facade to a depth of several metres, without encountering its lower limit. Both these walls appeared to be dated to the Proto-literate period.

For obvious reasons, we concluded that the area enclosed between these walls and the ziggurat must represent some sort of building. And, sure enough, a superficial examination revealed an apparently uninterrupted mass of solid *liben*. As is so often the case with remains of this sort, when they comprise a confused mass of masonry, dating from several successive periods, the only effective method of elucidation was the careful articulation of each individual brick over practically the whole area. This was done, and led to the discovery, directly beneath the foundations of the southern corner of the ziggurat, of a temple dating from the Al'Ubaid period. It was surrounded on three sides by concentric masses of masonry, distinguishable by the size and colour of their bricks, which appeared to represent three subsequent extensions of the platform upon which it stood, perhaps dating from the early Uruk period. Since the stone wall and terrace which we had previously discovered, seemed to represent two further extensions of the same platform, making five in all, it was decided that our Al'Ubaid building should be designated 'Temple VI'.

Some attempt was now made to locate the southernmost corner of the platform complex, and to trace its southeastern face. This proved extremely difficult, partly owing to the natural process of denudation, but partly also to the activities of our predecessors, who had excavated and then left exposed such masonry as survived at this point. Meanwhile the area of excavation was extended northwards, towards the axial staircase of the ziggurat, in order to include the whole plan of the

temple at that end. Part of the chambers on the northwest side, which were overlapped by the foundations of the ziggurat, could fortunately be traced and cleared by tunnelling.

Temple VI was removed, after complete excavation and recording, and its predecessor, Temple VII discovered beneath. This also was completely cleared before the end of the first season.

On several occasions when work on the temples was rendered impossible by heavy rain or other circumstances, some investigations by sounding were made in the higher parts of the main mound, both in its extreme southern and extreme eastern corners. In all cases the surface of the mound was found to be composed of a heavy crust of debris, evidently laid to form an emplacement for buildings at a late period. Directly beneath, were the mudbrick walls of chambers, still standing to a considerable height, but completely filled with clean, wind-drifted sand, exactly as had been recorded by all three previous excavators. One such building in particular, which happened to have escaped their notice, we decided to excavate completely, and this was done during the second half of the season. Perhaps its most striking characteristic was the height (in some cases nearly two-and-a-half metres) to which the walls remained standing, and their admirable state of preservation beneath the dry sand. Over the doorways, flat lintels or corbelled arches remained intact, and there were windows with sockets for wooden bars.

Twenty metres to the northwest of this building, an isolated chamber was excavated, whose main interest lay in the pottery which it contained. This included many classes of 'Uruk' ware such as was found in the deep sondage at Warka itself, both the 'Uruk Red' and 'Uruk Gray' types being well represented. So important did this exclusive group appear, for purposes of dating, that we considered it worthwhile to link the pavement on which it was found, by a stratigraphic trench, both to the building which we have just described and to the Al'Ubad levels in a deep hollow to the southwest. It was thereby shown to correspond exactly in time to the former, while only one intermediate stratum of indeterminate pottery, separated it from the latest buildings of the Al'Ubad period. Thus, although our building itself was practically devoid of any ceramic dating-evidence whatsoever, we were now able indubitably to associate, both it and the many contemporary buildings elsewhere in the mound, with the earliest phase of the Uruk period.

Since our excavations in Square H/5, included a section of the late stone retaining-wall which surrounds the acropolis on all sides, at the point where Taylor's Buttress is built against it, this structure was, perhaps for the last time, cleared and recorded, with a sufficiently

convincing explanation of its original purpose. Other minor investigations, undertaken during the course of the first season, included a prolongation of the original search-trench in Square F/5, beyond the 'portico' building to the late retaining wall of the acropolis and beyond. At this point, the debris of a fairly long occupation, during the early Uruk period, appeared to rest upon clean sand. The stone retaining-wall cut into the stratified layers of this debris. Another point at which some clearance was made, was at the northern corner and in the northwest slope of the ziggurat ruin. This work was continued more effectively in the second season.

Finding, towards the end of the first season, that our discoveries so far included very little in the way of actual museum objects, we decided that an attempt be made to find the "lion in black granite", which Taylor had seen on the surface, but Campbell Thompson considered to have disappeared, after an attempt by a member of the Sa'adun family to remove it. The position of the sculpture in Taylor's time was carefully marked on the plan of the site which accompanied his report. But, owing to the primitive character and consequent inaccuracy of his plan it proved in practice, extremely difficult to locate reliably on the actual mound. Eventually an area of maximum probability was delimited, in the northern corner of Square F/4, and a small gang employed in digging a system of trenches through the surface-soil and soft sand, down to the hard rubble, (probably fallen from the retaining-wall), which lay some two metres beneath the surface. After eight days of fruitless search, the workman in charge of the gang, Sd. Hussein Saleh, saw the side of a trench collapse, revealing the ear and one eye of the long-lost statue, which, happening to be located between two of our trenches, had it not been for this happy accident, might never have been found. The lion, which proved to be as "perfectly" preserved as Taylor had said, was afterwards transported to Baghdad, and is now in the Iraq Museum.

Finally, during the last days of the first season, search-trenches were also dug in two of the subsidiary mounds in the vicinity of Tell Abu Shahrein. One of these, which lies about one kilometre to the north of the main mound, proved to represent a long occupation during the Early Dynastic period. The other, about two kilometres to the southeast, to which Hall had attributed the name, 'Sulebiyah', turned out to be a very extensive settlement of the late Babylonian period, containing, in addition to buildings, many burials.

The Second Season 1947-1948

At the beginning of the second season's work, we had two principal objectives in view. One was the discovery, if possible, of further prehistoric temples beneath Temple VII, and the continuation of the sounding down to the original virgin soil. The second was to make a detailed recording of the ziggurat ruins, and a careful examination of their foundations, in case any traces might remain of buildings belonging to the proto-literate period, which must have occupied the site before it was built.

During the summer of 1947, the drifting sand, for which Tell Abu Shahrein is so justly famous, had completely filled the cavity created by the temple excavation during the previous winter, and was once more piled in a great drift against the flank of the ziggurat. As a result, many tons of sand had again to be removed, before the work at this point could be continued. Accordingly, while one gang of men were thus employed, another was occupied in the clearance of the ziggurat foundations. The results of this work, which are reported in detail elsewhere, were almost completely negative. Indications were indeed found that some large building of the proto-literate period had once existed on the site, for projecting from beneath the later masonry, we came upon a wall, more than two metres thick, built entirely of specially-made gypsum bricks, such as are characteristic of that period alone. But the task of tracing it further was rendered impossible by the great weight of Third Dynasty masonry super-imposed upon it. At the same time it seemed probable that the traditional richness of the building, to which this wall belonged, had become a legend in later times. For the whole ziggurat area was honeycombed with tunnels, evidently dug at the command of some late king, and afterwards refilled, preparatory to re-building the ziggurat itself. We ourselves made some attempt, by means of horizontal shafts, cut beneath the Third Dynasty foundations at proto-literate level, to ascertain how much more of the building still existed; but were, in the end, frustrated by the extreme hardness of the Third Dynasty brickwork.

A month sufficed for this work to be brought to a point where little more could profitably be done. Our wall-tracers were thereupon transferred to a general investigation of the area outside the acropolis retaining-wall. This almost immediately resulted in the discovery of the Al'Ubaid cemetery, which is located in Square G/5, on the outskirts of the late 'Ubaid settlement. The excavation of about two hundred graves in this cemetery, occupied half the total of our workmen for the remainder of the season. At the same time small gangs were periodically detached for the purpose of determining its extent, and of testing the whole area outside the retaining-wall for

traces of further cemeteries.

Meanwhile, in the temple area, the clearance of sand from the cavity having occupied about ten days, excavating was once more resumed.

After the removal of Temple VII, which had been excavated in the previous season, the clearance began of a succession of earlier buildings beneath, which provided the expedition with a major interest for the rest of the season. A climax was reached in Level XVI, with the discovery of a primitive shrine, built of mud-brick, and dated by a completely new class of painted pottery to a period earlier than Al'Ubaid. This was preceded by three occupation levels, containing only fragmentary walls, the earliest of which corresponded to the foundation of the first settlement upon a dune of wind-drifted sand.

More casual investigations, conducted during the course of our second season, included the clearance of the acropolis retaining-wall at various points in its circuit, in order that its alignment might be correctly recorded on our site-plan. During the course of this work, a prolonged but unsuccessful attempt was made to locate the main entrance or approaches to the acropolis itself.

Brief soundings were also made in two minor sites, situated at a distance of a few kilometres to the southwest of the main mound.

The Third Season 1948-1949

There were at the beginning three objectives for the excavations of the third season which lasted for about three months. One was to find out the stratigraphy of the acropolis at a point of some distance from the place where the prehistoric temples were discovered in the first two seasons for the sake of correlation and confirmation of the discoveries made previously in the Temple Sounding. This undertaking was fulfilled in the sounding made in Square G/5 at about 70 m. southeastward from the Temple Sounding, in an area 7×7 m. which was later called by us the Hut Sounding on account of the remains of huts found in levels X-XII in it.

The second objective was to look for the residential area of Eridu outside the acropolis which proved by excavations of the previous seasons to have become strictly a place of temples and buildings of religious

functions, since the times of Early Uruk period. This objective was greatly accomplished by the discovery of two large secular buildings near the surface of the North Mound, which is at about one kilometre from the acropolis, and in which Early Dynastic remains were discovered in a test trench in the first season.

The third aim of the work was to do more testing of the small mounds situated in the region of Abu Shahrein, in order to get a better picture of that region. But this objective was almost given up and replaced by the extensive work done at the North Mound and also by the investigation and excavations for the last four weeks of the season done at Tell el-Lahm beginning on 5th of February, and where climatic conditions were slightly better. In the third season the sand storms at Eridu were unbearable, starting as early as the first few days of February. Fortunately the excavation at the Hut Sounding was completed to its finest requirements, although it was impossible to work in the last few days at the bottom of the pit from 10.30 A.M. onward, due to the severity of the sand storms. The report on the excavations at Tell el-Lahm was published in *Sumer*⁽²⁰⁾.

Excavations proceeded right at the beginning of the season simultaneously in both places: the North Mound and the Hut Sounding. In the former test trenches were dug at the start, near the apex which is 4.5 m. higher than the plain, and also on the western slope where walls of considerable thickness built in plano-convex bricks were encountered. As the search progressed, it was found after a rainy day that those uncovered walls belonged to a large building which plan could be roughly seen on the ground, due to the difference between the colours of the walls and the filling. Hence the excavations were directed in the light of that ground plan, proceeding from courtyard 1 (Fig. 139) in different directions. It was found that we were dealing with two adjacent buildings of almost identical ground plan: the north and south buildings. Due to the shortage of time, the remains of only the former were completely uncovered, but the walls of the south building could only be traced by excavation without emptying the rooms and courtyards by removing the debris therein.

In the same time a section of an outer double wall of these buildings or of the whole settlement was uncovered near the apex of the mound, running almost parallel to the eastern outer wall of the two buildings. Attempts were made,

in vain, to trace its extension at both ends, by several trenches.

In the meantime it was decided that a sounding should be made in the North Mound and on the ground of the two uncovered buildings, in order to get the stratification of the settlements there, especially because we were sure that the third season would be the last chance for us to do so. A shaft was sunk in the L-shaped courtyard (Fig. 148) of the north building where fifteen levels mostly floors were uncovered; the earliest is at a depth of 7.90 m. from the surface, belonging to the middle Uruk period, and resting exactly on a virgin soil of pure sand, in which digging continued for another metre where underground water prevented us from going deeper.

The progress of excavations at the Hut Sounding was continued in the chosen area 7 × 7 m. where fourteen levels were uncovered, with remains of a hut appearing for the first time in Level X. Hiatus level (L IX) divided the discoveries into two phases: standard Ubaid and Late Ubaid. The earliest level (L XIV) rested on a hill of pure green sand in which a large hole was sunk for a depth of further four metres, encountering no traces whatsoever of archaeological evidence.

B. General Summary of Results

The new picture of Eridu's early history, which may be reconstructed from the evidence of our archaeological discoveries, should perhaps be considered as the primary result of our first two seasons' excavating. In outline it would now appear as follows.

At some time, perhaps towards the close of the sixth millennium B.C. the first human settlement was established at the site now called Tell Abu Shahrein. The location chosen for the settlement, was a high dune of wind-drifted sand, probably forming a convenient island in a wide area of marsh-land, once a tidal lake at the head of the Arabian Gulf. The settlers themselves, on arrival, were already possessed of a well-developed and distinctive culture of their own, characterised notably by a class of painted pottery not previously discovered in south Iraq. In fact, the absence of any close parallel for this ceramic, either in the northern districts of Iraq or in neighbouring countries, at present renders equivocal all speculation as to the geographical provenience of its makers.

20. *Sumer*, Vol. IV (1949) P. 154-172.

Apart from the pottery, whose technical quality suggests a high standard of craftsmanship, the only evidence available as to the character and attainments of these earliest settlers, was provided by the architectural remains which we encountered. The earliest traces of building were separated from the virgin sand only by a few centimetres of occupational debris. These were fragmentary walls, constructed of well-made, rectangular **liben** bricks. It is therefore safe to assume that our settlers brought with them from elsewhere a fairly advanced knowledge of building. In any case, after a sojourn at the site, corresponding in length to three distinct occupation-levels, we find them erecting a building, again in rectangular **liben**, whose function is recognisable as that of a religious shrine. Furthermore the fact that, incorporated in it, are certain features, destined to become indispensable attributes of Mesopotamian sanctuaries over a period of several millennia, postulates a cultural continuity, significant in considering what relationship might exist between this people and Sumerian posterity.

After a further period, represented archaeologically by metres of occupational debris, and about three distinct building levels, if ceramic evidence alone may be accepted, the first arrivals were probably displaced by a new ethnic element, whose entire character is already well authenticated, and familiar to archaeologists under the name Al'Ubaid. One notable link between these two cultures, the pre-'Ubaid and the 'Ubaid, was again a ceramic one. A peculiar variant of the former, first known to have been produced by potters living in a village on a bank of the Euphrates, bearing the modern name of Qal'at Hajj Mohammed, proves to have been in common use from about half way through the pre-'Ubaid occupation, until nearly the end of the 'Ubaid period.

There are other indications to suggest that the habits and life-pattern of the community were neither disrupted nor even greatly changed by the transition from one culture to another, which the change in the pottery has been taken to represent. First among these is the fact that a religious shrine continued to be re-built, presumably at fairly regular intervals, upon the same site, though it now took the form of more sophisticated buildings than the simple sanctuary of the first settlers. The ground-plans were recovered of six successive temples (Temples XI-VI), dated by the pottery which they contained, to the Al'Ubaid period. Their division into two subphases seems to be indicated by the fact that the architecture of Temples XI-IX, and some aspects of the pottery from Temples XI-VIII,

more closely resemble discoveries of the 'Al'Ubaid' period in North Mesopotamian sites, such as Tepe Gawra, than anything hitherto found in the south. The failure of deep soundings beneath other Sumerian cities of the south, to encounter this 'North Iraq' variant of the Al'Ubaid material, before reaching virgin soil, may be perhaps taken to suggest, not only the superior antiquity of the Eridu settlement, but that the population of most other early settlements in the south, dates only from a period when the cultural characteristics associated with the appearance of Al'Ubaid settlers in the north, had already been considerably modified. The importance of the new light which the Eridu discoveries seem likely to throw on the relationship in time between these two variants of the same culture, is thus once more emphasized.

As has already been said, the last phase of the Al'Ubaid occupation at Eridu (represented by Temples VII & VI), has all the conventional features, which have now for many years been associated with this epoch. The greatest possible interest, however, centres upon the temples themselves, which have no parallel at any other southern site yet excavated. The functioning of their plans, and the indication which they afford of ritual principles, when studied in relation to the (presumably) earlier 'Ubaid temples of Tepe Gawra, and the somewhat later shrines of the succeeding (Proto-literate) period at Warka, cannot but constitute an important bridge between the two. A minor indication which they afford, both of the geological setting of Eridu at this time and of the social habits of its inhabitants, is the ubiquitous traces which they contained of fish, brought, no doubt, as offerings to the god, Enki, or to his more primitive predecessor. Here, undoubtedly, was a marsh-dwelling people, for whom, as for the Marsh-Arabs of today, fish was a staple diet.

Another outstanding feature, hitherto unparalleled elsewhere, of the Al'Ubaid settlement at Eridu, was the cemetery, corresponding in time to Temple VI, which was discovered on the outskirts of the village to the southwest. Though the full study of the skeletal and other evidence provided by the graves, is still by no means complete, it is already possible to anticipate that the contribution which they will eventually have made to our knowledge, both of the physical and of the social anthropology of the 'Ubaid period, will be considerable.

The ethnic upheaval, which marked the end of the Al'Ubaid period, seems also to have brought about a very remarkable change in the character of the Eridu

settlement. There is reason to believe that, whether on account of the desiccation of the surrounding country or for some other reason, Eridu now ceased to be a village supporting an agricultural community. Its shrine, however, the tradition of whose sanctity remained, and whose importance had correspondingly increased, was now rebuilt on a larger scale, and the whole of the ancient mound soon came to be occupied by subsidiary buildings of a religious character and dwelling-places for priests. These were built in the formal architecture of the new immigrants from the north, their walls sometimes being covered with painted designs and decorations.

This was the situation at Eridu during the first half of the Uruk period, which appears to have been brought to a conclusion by no less an event than the total abandonment of the site. It is hardly possible to avoid the conclusion that the frequent dust storms which to-day are still such a familiar feature of life at Tell Abu Shahrein, had at this time temporarily rendered the site uninhabitable. In what appears to have been an almost incredibly short time, drifting sand had filled the deserted buildings of the temple-complex and obliterated all traces of the once prosperous little community. The possibility that the temple itself remained standing, while the remainder of the site was thus deserted, is confirmed by the fact that, during the succeeding, proto-literate period, it was twice rebuilt on a rich and magnificent scale. But the absence of all traces of contemporary buildings in other parts of the site, suggests that the area of the sacred precinct was now even more restricted.

At this point, there is a considerable hiatus in the history of the site, as it is known to us from the results of our excavations. If definite and now familiar criteria, such as bi-chrome pottery and a peculiar glyptic, may still be taken to distinguish the Jemdet Nasr epoch from the remainder of the proto-literate period, there is negative evidence to suggest that the epoch is not represented at Eridu. During the Early Dynastic period also, there is reason to suppose that the fortunes of Enki's shrine at Eridu had reached an extremely low ebb. In fact, the only meager remains of this period, were indications on the slopes of the mound which now represented the ruins of the prehistoric shrine, that some kind of impoverished sanctuary still survived at its summit. At the same time the existence, now satisfactorily established by our soundings, of an extensive Early Dynastic settlement about a kilometre to the north of the main mound, must once more be taken to suggest that the accumulation of loose sand around the ruins of the original settlement had rendered it practically uninhabitable.

Only one piece of evidence was discovered, testifying to the continued existence of the shrine in the Akkadian period. The structure known as "Taylor's Buttress" was first built of plano-convex baked bricks, whose shape and size, for various reasons, suggests an Akkadian rather than an Early Dynastic association. Our own explanation of this structure was that it served as a kind of "chute", drawing off rain-water from buildings on the top of an "acropolis". And, indeed, the plano-convex "buttress" is built up against the somewhat dilapidated remains of a stone retaining-wall. Here, then, for the first time is evidence to show that the Eridu mound had been deliberately revetted with stone, in order to create an emplacement for a raised temple-precinct. Since, however, apart from a few broken pots no traces whatever were found elsewhere of occupation during the Akkadian period, it is natural to conclude that this work was never completed.

It is, in fact, not until the early years of the Third Dynasty of Ur, that any important building programme is known to have been undertaken for the restoration and rehabilitation of the shrine of Enki at Eridu. It has generally been inferred, from the existence of bricks stamped with his name in the structure of the ziggurat ruins, that Ur-nammu, the founder of that dynasty, took the initiative in this respect. More recently, however, the actual position of his bricks, mixed almost haphazard with those of his son, Amar-Sin, in the lower part of the structure, has suggested that Amar-Sin was actually the builder, and that some bricks of Ur-nammu were merely incorporated for reasons of filial piety. In any case, though the evidence is by no means conclusive, it has come to be generally assumed that it was Amar-Sin who now completely reconstructed the temple-precinct, and furnished the old sanctuary hill with a colossal ziggurat such as his father had recently built at his capital, Ur. This apparently involved either completing or restoring the stone retaining-wall around the acropolis, and levelling the whole area of the emplacement on top. For this purpose he used a heavy rubble, composed of debris which he had removed from the sanctuary hill, when preparing it to receive the foundations of the ziggurat. No architectural evidence has survived, to show whether any building other than the ziggurat itself was ever actually constructed upon the emplacement thus provided, although large fragments of stone, still lying on the surface in the eastern corner of the mound may perhaps be taken to date from this period.

The presence in small numbers of bricks inscribed with their names suggests that several later kings

attempted to rebuild, or, at least, repair the ziggurat. It was perhaps one of these who first of all honeycombed the temple area with tunnels, apparently in search of the traditional treasure of the ancient shrine, which lay beneath. One king of the Larsa dynasty certainly added some peculiar bricks to the structure, and, since he found it necessary once more to rebuild the old baked-brick drain against the southeastern retaining-wall, one may take it that he erected some building at that side of the acropolis. Yet the extremely scanty evidence which has survived of the work of these and other late builders, does not lead one to suppose that, from now onwards any notable building-project was successfully carried out. The latest attempt of all to commemorate the shrine, is perhaps represented by a few bricks stamped with the name of Nebuchadnezzar II.

In the third season, the picture of Eridu which was drawn in the first two seasons did not change but was enhanced in the following three points:

1. The Hut Sounding in the acropolis proved that the settlements during the two phases of pre-Ubaid period, the Eridu and Qal'at Hajj Mohammed phases were confined to the north and probably west of Tell Abu Shahrein, and did not extend to the place of the Sounding in which the fourteen archaeological levels discovered correspond to Temple XII and later. The mode of life in huts of the early levels of the Sounding, was of fishers and dowl-hunters, indicating that marshes were in the neighbourhood.

2. The Palace Sounding in the North Mound proved that since the middle of Uruk period the settlement was on that mound outside the acropolis area, although no building remains were discovered of Uruk period.

3. The elaborately planned Palace of two identical large adjacent buildings of plano-convex bricks, which was discovered in the North Mound, indicates a prosperous period for Eridu. It was probably the kings of The first dynasty of Ur or an unknown governor a little earlier in the late Early Dynastic II Period who built that Palace, and very likely they built a ziggurat and other constructions on the acropolis, which disappeared in the levelling of the surface undertaken by Amar-Sin.

The excavations in the temple area and in the hut sounding in the main mound (No. 1) and in the North Mound (No. 2) showed that the occupation levels of the settlements in these areas were not at the same levels (see the three sections in Fig. 8). We came to the

conclusion that the earliest settlement at Eridu was established on a sand dune which had at that time appeared on the edge of a sweet water lagoon (perhaps the abzu of Eridu). Such dunes can be formed because reeds at the water's edge catch the blown sand and similar dunes can be seen in places on the edge of the Hor al-Hammar south of Nasiriyah.

At the top right of Fig. 8 is the contour map of Eridu (Mound no. 1) and under the contour map is the reconstructed section A-A drawn through the mound from east to west. This shows the earliest dune standing about 6 metres above the water level and the virgin sand level. During the pre-Ubaid period the mound increased almost threefold in size, and at the beginning of the Uruk period the mound (the Uruk dune in Fig. 8) was a very high mound composed of the two earlier settlements (Eridu and Ubaid).

The column at the left side of Fig. 8 shows the levels of the various temples from the earliest period to the Ur 3 ziggurat building in comparison with the virgin sand level. The middle column shows the levels of the earlier and later Ubaid settlements in the Hut Sounding also in comparison with the virgin soil (sand and water). The third column (at the bottom right in Fig. 8) shows the middle Uruk and Early Dynastic levels in the North Mound (No. 2) in comparison with the virgin soil.

From the three level columns in Fig. 8 we came to the conclusion that the virgin soil was at the same level in all the above mentioned periods. From Column 3 one can see that level XV which belongs to the middle Uruk period lies almost at the virgin soil (sand) while in the Temple area the earliest settlement of Eridu level XIX is at a level almost 6m. higher than the virgin soil. But in the hut sounding the earliest Ubaid settlement is at a level almost 7.5 m. higher than the virgin soil.

A line drawn through the three sections showing the present plain level of Eridu is at a level of 4.70 m. above the virgin soil.

In Fig. No. 2 the scattered later settlements appear to be far from the Eridu and the North Mound, this indicates that the lagoon of Eridu began to decrease in size, so the settlers began to move with the receding edge of the lake.

C Scheduled Summary

ARCHITECTURE

Al'Ubaid Period

- Remains of temples in Levels XVI-XIV and XI-VI.
- Tombs in Cemetery.
- Some rooms of dwelling-houses.
- Remains of huts in L.XII-X; in the Hut Sounding.
- Remains of buildings in L.VIII-I, in the Hut Sounding.

Early Uruk Period

- "Portico" and other buildings in F/4.
- Non-secular building and isolated chambers in H/5.
- Temple-platform extensions V-III ?
- "Chambers" cleared by previous excavators.

Proto-literate Period

- Temple-platform extensions II & I.
- Building in **Juss** bricks beneath **ziggurat**.
- Architectural objects in rubble filling of acropolis.
- Taylor's "column-base"

Early Dynastic Period

- Thin walls on slope of old sanctuary-hill.
- Three successive palaces (L. III-I) in the North Mound.

Akkadian Period

- Earliest version of "Taylor's Buttress".
- First retaining-wall.

Third Dynasty of Ur

- Second retaining-wall
- Rubble filling of the acropolis
- Ziggurat of Ur-nammu-Amar-Sin.

Dynasty of Larsa

- "Taylor's Buttress" re-built.
- Repairs to ziggurat and retaining-wall.

Later Periods

- Some repairs.

OBJECTS:

Pottery.

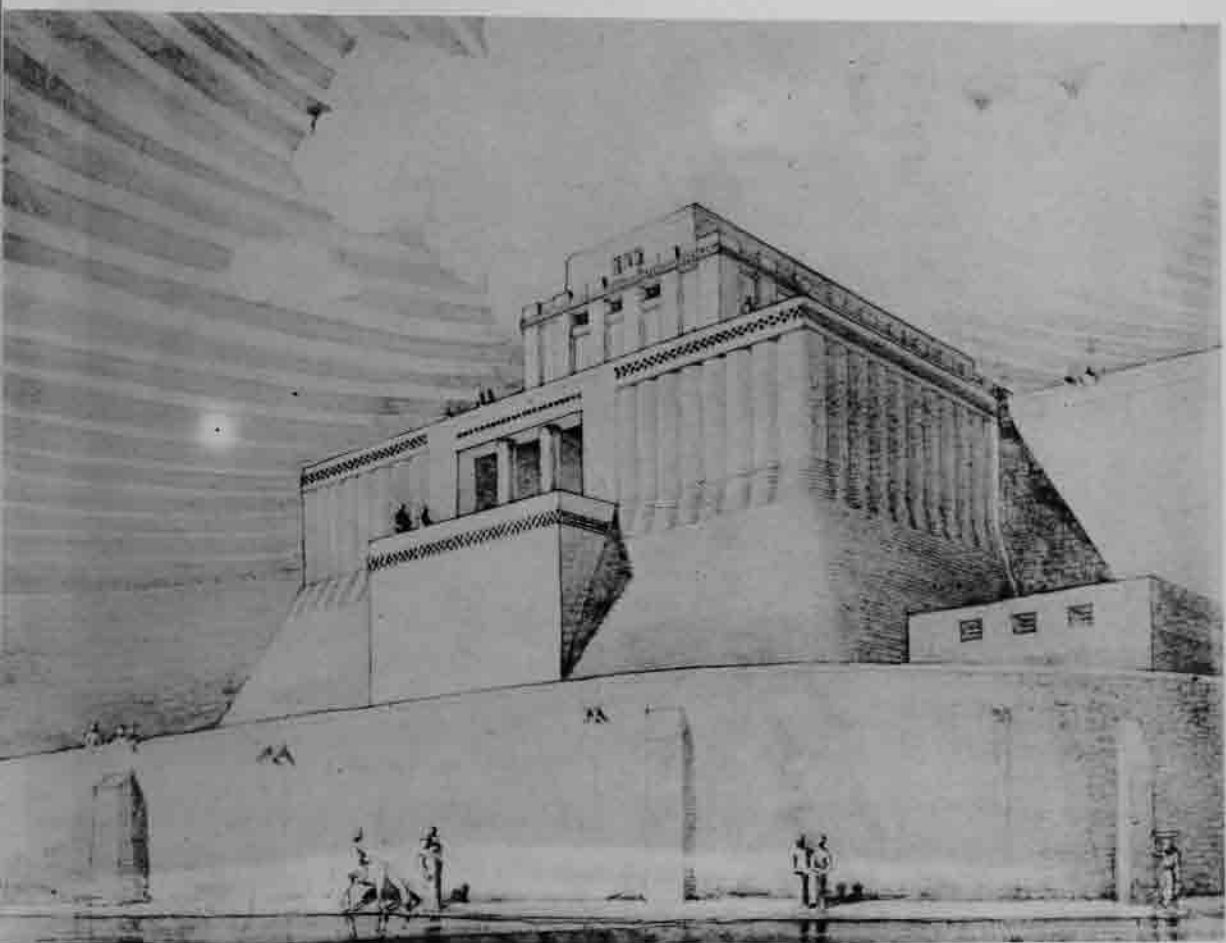
- Pre-Al'Ubaid pottery from the temples.
- Haji Mohammed pottery from the temples.
- Al'Ubaid pottery from the temples.
- Early Uruk pottery from the sand-filled buildings etc.
- Proto-literate pottery from the filling of the acropolis.
- Small prehistoric objects from temples and cemetery.
- Black stone lion.
- Brick and other inscriptions.

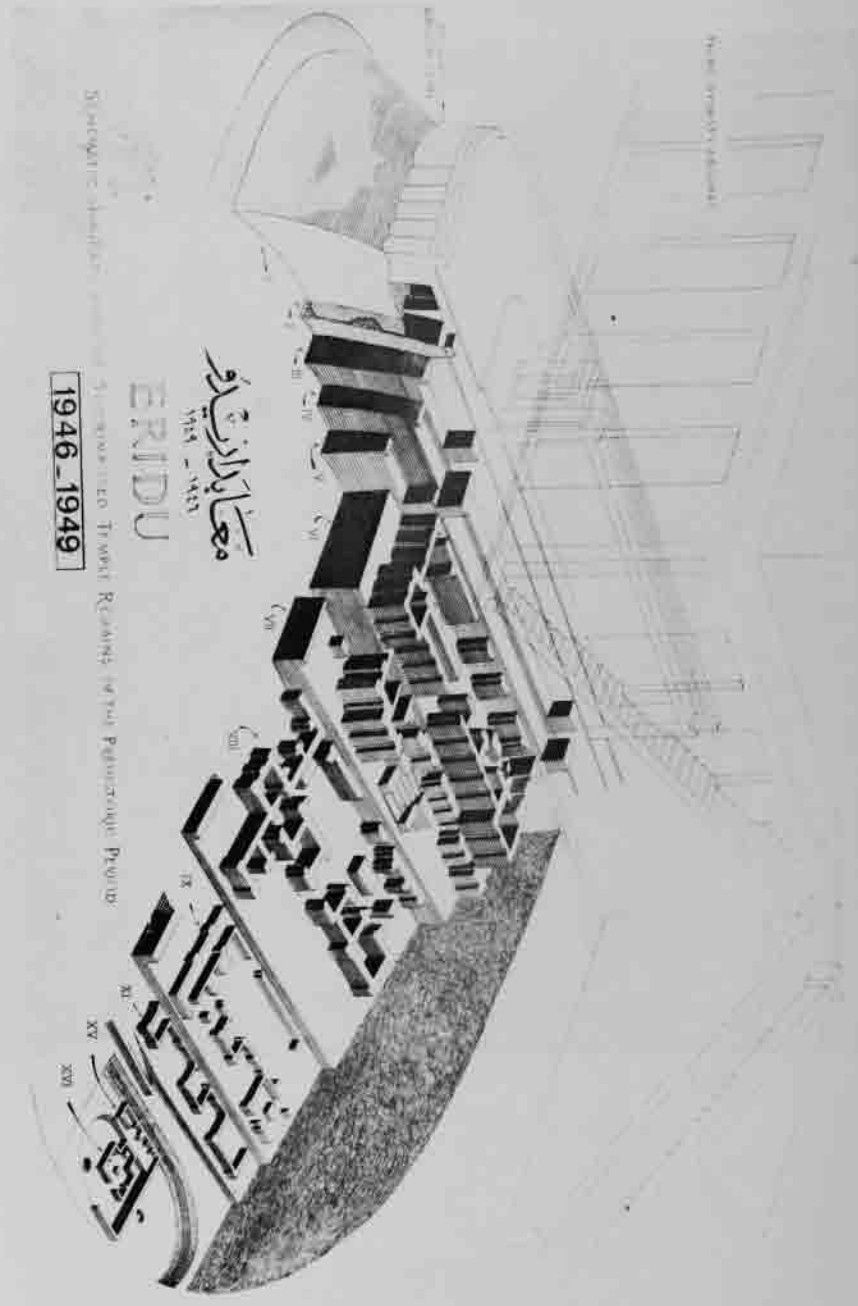
Preliminary Publications

- 1) **First Interim Report.** "Sumer", Vol. III, No. 2.
- 2) **Illustrated London News.** Issue of May 31, 1947
Article & photos.
- 3) **Uruk Pottery from Eridu.** "Sumer", Vol. IV, No. 1
- 4) **Second Interim Report.** "Sumer", Vol. IV, No. 2
- 5) **Illustrated London News.** Issue of September 1948. Article and photos.
- 6) **Third Interim Report.** "Sumer", Vol. V (1949)

CHAPTER 3
ARCHITECTURE







1946-1949

FIG-εC





A. The Acropolis and its Retaining-walls

FIG. 4

It has already been explained at length, how, at some time in the historic period, the mound at Eridu, representing building remains of the Uruk and Proto-literate periods, superimposed on an 'Ubaid settlement, had been surrounded by a stone retaining-wall, and the enclosed space levelled to form an emplacement for a new group of religious buildings.

There was little difficulty in tracing the outline of the acropolis thus formed. It was represented on the surface by an irregular line of limestone boulders, breaking away from the gypsum mortar in which they were originally laid; while at two points, (one on the southeast side in Square I/6, and another to the southwest in Square G/7 Fig. 3) the outflow of rainwater from the raised ground within the enclosure, had created wide breaches, which left the stone-work exposed in section on either side. It was first possible to fix the four corners of a somewhat irregular rectangle, and afterwards to confirm the alignment of the walls between, by a series of soundings. Slightly more

complicated was a side bastion, projecting in the centre of the northeast side, whose purpose and connections with the main platform, were at first not easy to determine. It should also be said at once, that it eventually proved impossible to determine for certain the position of the principal approach or approaches to the acropolis. In the case of both the main breaches already mentioned, the gulleys had cut so deep, and the walls on either side were so damaged, that no traces of gatestructure, stairway or ramp could be found. Similarly on the northeast side of the projecting bastion, whose purpose might also have been to give architectural emphasis to the main approach, the process of denudation had unfortunately reached a point where, if any feature of this sort had ever existed, it could no longer be identified. Four smaller breaches in the northwest retaining-wall seemed less likely to represent means of entrance, if only on account of their position in the rear of the principal shrine.

Any speculation as to the date at which the retaining-



FIG. 5

wall was constructed must be discussed in relation to its actual construction, and to the sections through it which we were able to obtain. In this connection, two of our soundings were of major importance. One was to the northeast of the early Uruk "Portico" building in the northern corner of Square F/4, and was really an extension of our earliest searchtrench. The other was beside the structure known as "Taylor's Buttress". In the case of the latter, it will clearly be seen in the photograph (Fig. 4), that an actual section through the retaining-wall had already been cut for us by our predecessors. A boy is seated in the gap thus created, which is now filled with sand. A point of primary importance which this sounding established was that, at this point at least, two stone retaining-walls had been constructed at two different periods. First, above the boy's head, is the ruins of the "buttress" itself, as discovered by Taylor. Its real purpose is now established beyond any reasonable doubt, as that of a brick "chute", to carry off the rain-water from a

building at the higher level. The retaining-wall against which it was built, is represented by stonework projecting from the sand, beneath the petrol tin in the picture. The "buttress" in this case is in too ruinous a condition for its shape to be very clear; but it is constructed of rather large plano-convex bricks, with the usual hand-indentation on the convex surface. From their shape and size, it is impossible to say positively whether they date from the Early Dynastic or Akkadian period.

The later buttress, on the other hand, is constructed of yellowish prismatic bricks (measuring $27 \times 17.5 \times 8$ cm.) bearing the double crescent stamp, which dates them to the Larsa period (discussed in connection with the ziggurat). It is built up against the earlier structure, and the retaining-wall to which it belongs appears in the foreground of the picture, separated from it by the gap created by a previous excavator. Near its base, the brickwork is sufficiently well-preserved to show the recessed channel in the centre for drainage. This, in fact,

is exactly comparable to vertical drainage-channels such as that partly preserved in the northeast face of our own ziggurat at Eridu, and others in the Third Dynasty ziggurat at Ur.

It is possible, then, from this sounding, to deduce the existence of stone retaining-walls at two different periods; one in the Early Dynastic or Akkadian period, dug down into the wind-drifted sand, which overwhelmed the buildings of the early Uruk period (see above, Fig. 24), and another built during the dynasty of Isin-Larsa, perhaps when the earlier structure had fallen into disrepair.

In the sounding Square E/4, only a single retaining-

wall was found and there was no indication whatever that there had ever been a second. It was here possible to examine the construction and position of the wall in detail, and to trace its face for a considerable distance, as may be seen in Fig. 5. The masonry, which is composed of rather large limestone boulders, laid in gypsum mortar, is not built vertically but lies inwards at an angle of about 15 degrees, cutting across the stratified debris of earlier occupations, as though a terrace had been carved out of the existing mound to accommodate it. Its foundations were bedded in the sandhill which preceded the prehistoric occupation at this point. This circumstance may clearly be seen in a photograph (Fig. 6), in which the line of the pavement contemporary with the retaining-wall

FIG. 6



also appears, sloping away from the stonework, just above the head of the workman seated in the foreground.

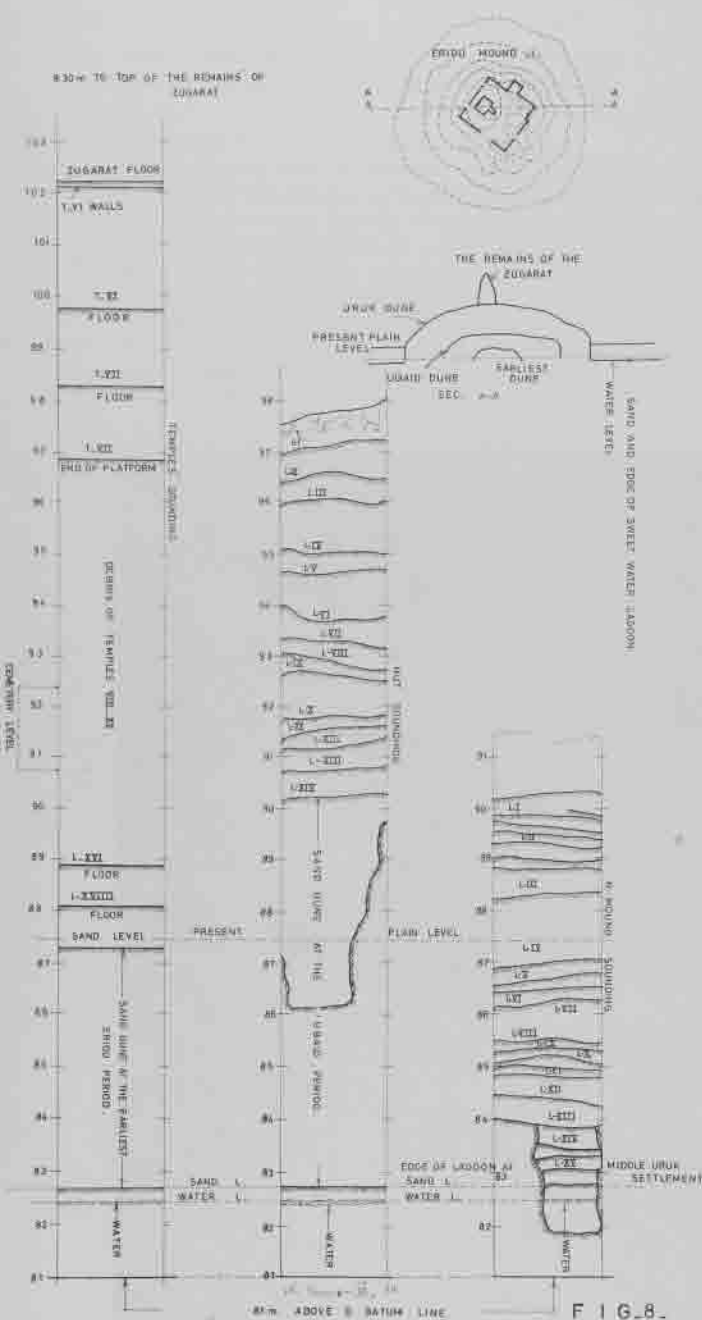
After tracing the face of the main retaining-wall southeastwards, as far as its junction with the projecting bastion, a deep sounding was made at this point, in order, if possible to determine the relationship in time between the two structures. The result, which may clearly be seen in another photograph (Fig. 7) was, however not altogether self-explanatory. The masonry of the two walls was exactly similar, and appeared to be roughly bonded together, as though they were constructed simultaneously; yet the foundations of the bastion wall descended to a point a metre deeper than those of the

main retaining-wall, and its face appeared, rather surprisingly, to have been covered with a very thick coating of mud-plaster.

In the hope that traces might be found of the main approach to the acropolis, all three facades of the projecting bastion were eventually completely exposed. It had been strengthened at some secondary period with wide buttresses both at the corners and at one point in the northeastern face. At another point in this same face, and also in the centre of the northwestern side, there were remains of secondary structures, built of "double-crescent" Larsa bricks, which might have corresponded in function to "Taylor's buttress". Unfortunately, as has already been said, the centre of the bastion's

FIG. 7





northeastern retaining-wall was so heavily denuded by the flow of rain-water from the upper level, that the hypothetical existence of an approach to the upper level at this point could not be substantiated.

The connection between the bastion and acropolis retaining-walls on the southeast side of the former, was also exceedingly difficult to establish, particularly since the sand persistently refilled our trenches as soon as they were excavated. Proceeding from the eastern corner, the acropolis retaining-wall could be traced at intervals in a northwesterly direction; but before it reached the bastion, it was interrupted, and the southeast face of the bastion continued far beyond the point where it should have joined it.

One further attempt was made by us to determine the character and purpose of the bastion. A deep sounding was made, behind its stone retaining-wall on the southeast side.

At the bottom of the trench was a *liben* wall of the early Uruk period. Above this is the mass of sand which accumulated when the site was abandoned at the end of the period. Deposited in the sand, while it was accumulating, was a collection of about thirty votive vessels of varying shapes and other forms of offering. The greater number of them protected from the sand by a kind of Clay "box". These vessels appear elsewhere in our schedule of pottery. Behind the vessels was the sloping underside of the stone retaining-wall, built up against the sand in the historic period in order to create a bastion to the acropolis.

Another sounding which revealed a section of the retaining-wall of the acropolis occurs on the site-plan (Fig. 3), on the dividing line between Squares E/8 and F/8. At this point, a trench was cut southeastward from the corner of Temple I. It can be seen in a photograph (Fig. 9) where it reveals not only the face of the late retaining-wall (in the foreground), but also, in the further distance, a terrace-wall of an intermediate period.

The most remarkable feature of the area enclosed by the retaining-wall, which constitutes the acropolis itself, was the almost total absence of any remains of the historic period, other than the actual ruins of the ziggurat. Any pavement which may have existed at the foot of the latter, had long ago been removed, and the denuded surface of the mound sloped sharply away from its foundations. In fact, if the base of the ziggurat may be taken as corresponding to the top of the acropolis, then the entire platform must be assumed to be denuded beyond the point where contemporary building remains could be



FIG. 9

expected. Details of surface exposures, resulting from this process of denudation in various parts of the platform, are as follows:

Where the northwest side of the ziggurat is denuded to beneath its foundations, remnants of a proto-literate temple-platform appear, as described in our section dealing with the architecture of that period. The western corner of the acropolis, and the section behind the ziggurat on the northwest side, represent a confusion of stone retaining-walls and fillings, also connected with this and later periods. To the northeast of the ziggurat, beneath the rubble filling with which the top of the acropolis is levelled, are sandfilled, *liben* buildings of the early Uruk period, one of which, the "portico" building, was excavated by us, and another partially cleared by Campbell-Thompson. There is a high ridge along the

northeastern side, beneath which one would expect other such buildings to exist. In the eastern corner, Hall, and in the southern corner, Taylor, found the same conditions obtaining as we ourselves discovered in the building near the southwest retaining-wall, in Square H/5, namely sandfilled *liben* chambers, beneath a crust of rubble. Our own soundings in these two areas confirmed their testimony. Apparent extensions of the main mound beyond the retaining-wall on this side, are merely sand-dunes, created behind the acropolis by the prevailing wind, and showing signs only of ephemeral occupation at their summits. The whole centre of the mound has suffered maximum denudation, and here walls of the Al'Ubaid settlement appear everywhere beneath the surface.

B. The Ziggurat and its Surroundings

The ziggurat of Eridu, which is as usual in other Mesopotamian ziggurats, a structure of **libn** core encased on four sides by retaining-walls built in burnt bricks and bitumen mortar, is situated in the western section of Tell Abu Shahrein (Fig. 3).

Investigation in its ruins were undertaken in the first two seasons principally for the discovery of its corners and the tracing of its sides. It is found that the whole structure is very badly denuded especially the northwestern and southwestern sides, which have been under exposure to the prevailing strong wind coming from the west. Even the **libn** core of the ziggurat is greatly washed away. Thus nothing remained of the encasing walls, except the southwestern side of which a great part survived by the protection offered by the three staircases built against it. Of the northeastern side only a few small lower parts remained.

FIG. 11



The highest point in the ruins of the ziggurat is 9.5 m. above the lowest course of the burnt bricks at the angle between the central staircase and the eastern lateral staircase (Fig. 10). At this angle, part of the pavement of bricks stamped with the name of Amar-Sin is found at the level of the fourth course of bricks (beginning from the bottom) at the lateral staircase. While the highest point at present in the burnt brick wall of the ziggurat is only 6.8 m. high.

Judging from its remains, the ziggurat of Eridu was oblong, similar in shape and almost in size to the ziggurat of Ur-Nammu at Ur. Its length is estimated 61.8 m. and its width most probably 46.5 m. The length is estimated on the basis of the eastern corner (Fig. 11) which is fortunately found intact at its bottom, giving the length of the south-eastern side of the ziggurat. The distance between this corner and the central staircase is 27.4 m.

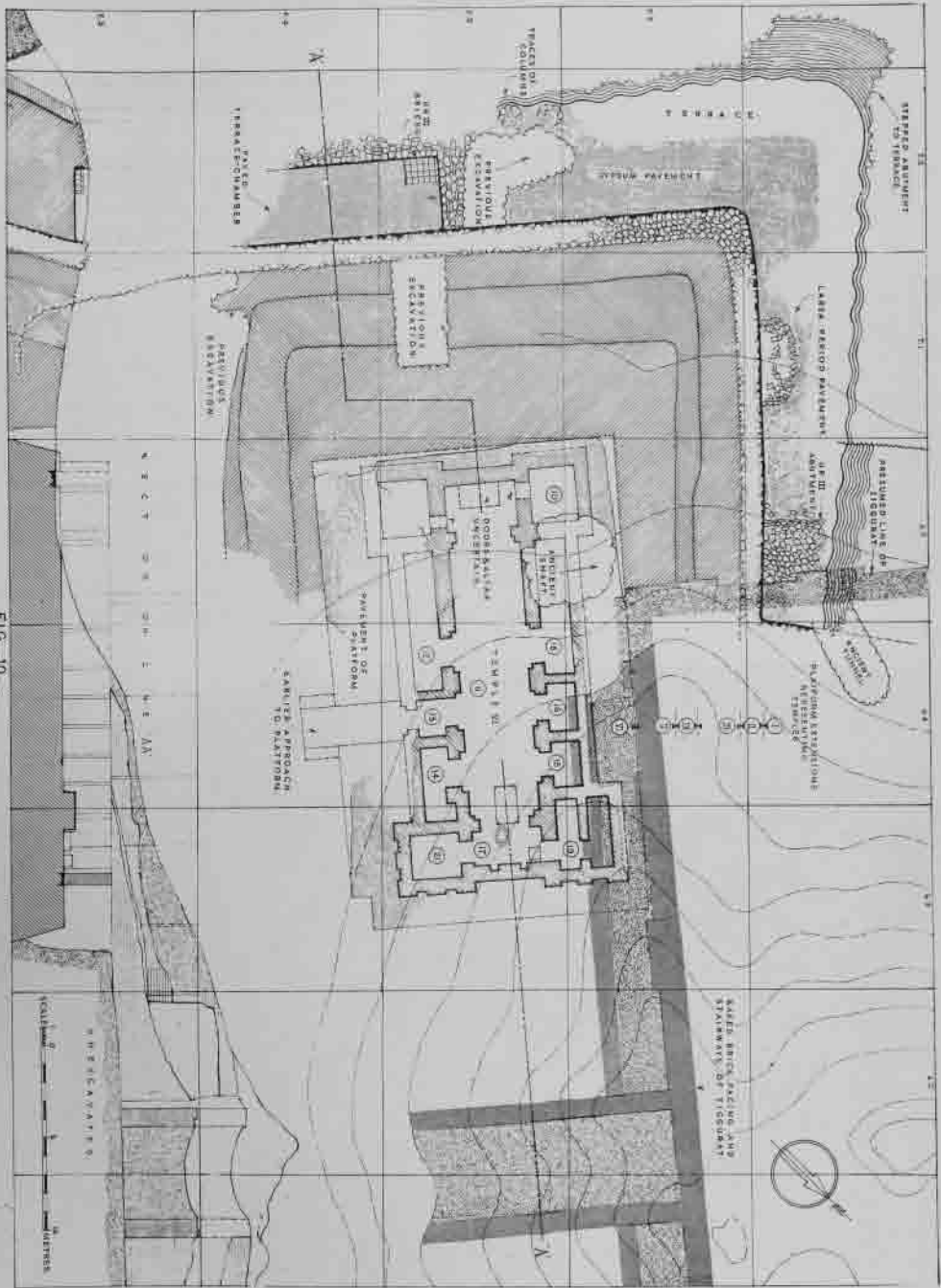


FIG-10

The southern corner is denuded completely, but it is supposed that it lay at a similar distance (i.e. 27.4 m.) from the central staircase. The total length of the southeastern side wall thus is 61.8 m. including 7 m. which is the width of the central staircase (Fig. 3). It is astonishingly almost equal to the length of the ziggurat of Ur, which is 62.5 m. long⁽²¹⁾. But the estimated width of the ziggurat of Eridu is 3.5 m. wider. Further comparison between the two buildings proves that the ziggurat of Eridu had its own following general peculiarities:

1. Instead of the northeastern side, the staircases are at the southeastern side, probably for facing the direction of the lagoons in the depression, where Abzu the sea was the abode of Enki the chief god of Eridu.

2. There are no two bastions in between the two lateral staircases and the central staircase.

3. The only side surviving to a considerable height, namely the southeastern side, does not show any of the weeper holes which are common in the encasing walls of the ziggurat of Ur.

21. Woolley, *Ur Excavations*, Vol. V. *The Ziggurat and its Surroundings*, P. 98.

4. The steps of the two lateral staircases are half as wide as the steps of the central staircase which are 5 m. wide.

5. The ziggurat is not built on levelled ground. The northern corner is almost 3 m. lower than the southern corner. Figure 11 shows how the bottom of seven courses of bricks, steps down at the extreme end of the southeastern side taking the shape of the contour of the ground.

The encasing wall of the southeastern side is 1.50 m. thick (not including the projection of the buttress). This side is relieved by three buttresses on each side of the central staircase, with projection of 0.45 m. The end buttress is 5.00 m. wide while the other two inner buttresses are each 3.7 m. wide. The first recess on the southeastern side, beginning from the central staircase is 5.70 m. wide, while the other two recesses each is 4.5 m. wide. At the corners, each side ends with a recessing of 0.45 m. wide. Both buttresses and recesses are plain, undecorated with vertical grooves.

The outer face of the walls of the three staircases are totally plain, without buttresses (Fig. 12).

FIG. 12



Of the northeastern side of the ziggurat there survived in situ only: the lower courses of bricks of the eastern corner, the vertical drain of rain-water (Fig. 13), a buttress (Fig. 14), and a few bricks of the bottom course. The northern corner of the *libn* core of the ziggurat seems to be indicated by the right angle formed by two lines of unhewn stones underlining the foundation of the *libn* core (Fig. 11). The distance between this right angle and the eastern corner of the ziggurat is 45 m. and if we add to it the width of the encasing wall of about 1.5 m. at the northern corner, then the length of the northeastern side of the ziggurat will be 46.5 m. which is presumably the width of the ziggurat. In any case a stamped brick of Amar-Sin is found in situ against the side of *libn* core only 1.5 m. from the corner of the *libn* core, indicating that the length of the northeastern side could not be less than 45.0 m. Four other bricks of Amar-Sin were also discovered in situ at 36.0 m. from the eastern corner. Figure (15) shows how the northeastern side steps down northwardly. The lump of burnt bricks in Figure (14) is a part of a buttress on the north-eastern side situated approximately at 29 m. from the north corner. It is six and a half bricks wide i.e. 1.80 m. wide.



FIG. 13

FIG. 14





FIG. 15.

The lower part of a vertical drain in the northeastern side has also survived (Fig. 13). It is at 18 m. from the eastern corner, with the width of the channel of 0.55 m. recessed in the encasing wall.

Traversing with the northeastern side is a wall of earlier structure built in rimchen gypsum bricks $45-42 \times 10 \times 10$ cm (a few half this size, $22 \times 10 \times 10$ cm) belonging to Jamdat Nasr or Uruk IV period. The outer face of this wall facing the northwest is regular, while the inner face is broken (Fig. 14). In its neighbourhood, scattered clay cones were found. Near the eastern corner is a structure in plano-convex *libn*, cut by the ziggurat indicating that beneath the ziggurat there were structures not only of Jamdat Nasr but also of Early Dynastic period or early Akkadian.

The following few varieties of stamped bricks found in the debris or in the structure of its remains, and also the type and size of the mud bricks of the core, help to date

the ziggurat and its restorations. (For the reading and translation of these inscriptions, see Chapter 6, Section A of this publication).

In the ruins of the ziggurat we found numerous bricks of Amar-Sin, three bricks of Ur-Nammu, one brick of Nur-Adad, a few bricks stamped with two crescents, and a single brick of Nebuchadnezzar II. For reasons later to be explained, it seems that Ur-Nammu began the building of this ziggurat, but the bulk of the task was left to his grandson Amar-Sin (1987-1978 B.C.) to accomplish. About two centuries later, Nur-Adad the king of Larsa probably had to do some restoration to this ziggurat.

Ur-Nammu built the core of the lowest stage of the ziggurat or probably only the lower part of that core, because the lowest stage shows, in the southeastern slope of the ruins (Fig. 16), two different methods of laying the sun-dried bricks of the core. In the lower part of the slope the mode is by laying courses of bricks flat while in



FIG. 16

the upper part the method is by laying course of bricks laid flat and courses set on edge. The latter mode is noticed also at the upper part of the core of Ur-Nammu's ziggurat at Ur⁽²²⁾. It is not surprising to find that even the size of the brick in both ziggurats is the same, $27 \times 16 \times 7$ cm., and it is possible that the bricks in the lower part of the core in the ziggurat of Ur, was similarly laid flat, but being enveloped by the burnt brick walls could not be investigated by Woolley.

Two complete bricks and a fragment of a third one, stamped with an inscription of Ur-Nammu, are the only stamped bricks of this king found by us at Eridu, lying on the surface on the top of the ziggurat. This stamped

inscription (Fig. 108, No. 1) is $31.5 \times 31.5 \times 7.3$ cm. and its stamp which is on the flat surface is 12×10 cm. Another text of Ur-Nammu inscribed on a stone was found outside the ruins of the ziggurat, lying near the eastern corner of Tell Abu Shahrein. This stone is approximately $40 \times 18 \times 20$ cm. (IM. 52374) has one hewn side on which is the inscription (Fig. 108, No. 2).

Although Ur-Nammu does not specify by name Abzu as the temple of Enki, but there is no doubt that this is what he meant in his inscriptions. It is very likely that certain quantity of burnt bricks were prepared for the encasement, but were not used during Ur-Nammu's life.

The building of the ziggurat of Eridu should principally be ascribed to Amar-Sin whose stamped bricks are very common in the ruins and some in the building of the encasing walls, measuring generally $26.5 \times 26.5 \times 5.7$ cm. and there are half this size. His inscription is in one column 19×5.5 cm. stamped on one of the two flat surfaces of the brick and also on one of the sides (Fig. 108, No. 3).

A simple oblong brick $25 \times 17.5 \times 6$ cm. stamped with the name of Nur-Adad, the king of Larsa (1801-1786 B.C.) was found among the debris almost at the middle of the northeastern side of the ziggurat (Fig. 108, No. 4). A similar stamped brick is reported by Campbell Thompson without mentioning its locus or size⁽²³⁾. Nur-Adad claims he built the temple of Enki and restored the city of Eridu, yet only one stamped brick in his name, we could find in the city. There are at Abu Shahrein also oblong uninscribed bricks $27 \times 17.5 \times 8$ cm. stamped with two crescents, which probably belong to Nur-Adad. Such bricks are found built in the surviving section of the middle of the northeastern side of the ziggurat together with bricks of Amar-Sin. But these bricks with crescents could be in a part restored by Nur-Adad. Two buttresses situated against the northeastern and northwestern sides of a bastion projecting from the retaining-wall of Eridu, are built in similar bricks stamped with two crescents indicating together with the Buttress uncovered by Taylor, that someone had done a large scale restoration at Eridu, and it may possibly be Nur-Adad.

Oblong bricks with such measurements and in such greenish comparatively soft clay are usually associated with Larsa period⁽²⁴⁾.

22. Woolley, *The Ziggurat and its Surroundings*, P. 113.

23. Campbell Thompson, *Archaeologia* LXX, P. 108, 116-117 & Fig. 6; yet in P. 109 is stated "But few of his bricks are recovered" implying that more than one stamped brick of Nur-Adad were found by Thompson at Abu Shahrein.

24. Oblong bricks stamped with two pairs of crescents were found by Campbell Thompson at Ur, Cf. *Archaeologia* LXX, P. 106 and Fig. 3, No. 1.

A brick 33 × 33 × 8 cm, stamped with the usual brick inscription of Nebuchadnezzar was found, lying to the west of the ziggurat near where the northwestern side is supposed to be (Fig. 108, No. 5). It is possibly transferred from the small mound No. 5 in (Fig. 2) in which a Neo-Babylonian settlement is attested.

The Axial Staircase

The central stairway of the ziggurat showed signs of having been further denuded since Taylor first saw and described it. It may therefore be well to quote his description before turning to its present condition. He says: "The staircase... is fifteen feet broad, and seventeen feet long, measuring along its inclined planes. The marble slabs that formed the steps were still plentifully scattered over it, as well as smaller pieces of the same material, bored through the back. The *escaliers* were of brick (four feet broad), and all bearing the usual Abu Shahrein inscription. The bed of the staircase was extremely hard sundried brick, under which was a fine sand. At its foot were the remains of a column of peculiar construction". He then goes on to describe the "column" (or rather column-base, as it appears in his pen-and-ink sketch) which seems to be composed of alternating laminations of stone and rows of cone-mosaics, and is encased in gypsum plaster, "mixed with small stones and pebbles". Taylor adds a foot-note about the "marble slabs". He says: "The blocks were twenty-two inches long, thirteen broad and four and a half thick; the smaller pieces from two to four inches square; all were well polished".

It was well that Taylor recorded all these facts, since much of the evidence available to him has now disappeared. The axial staircase, as we found it was pathetically dilapidated. It was just possible to determine the overall breadth of the structure, which measured 7.00 metres, and the width of the parapets on either side which was 1.00 metre. It was also possible approximately to locate its lower extremity by means of a 15 centimetre break in the inner face of one parapet, which could only have been the beginning of a terminal pedestal. Since the height of the first stage of the ziggurat could also be approximately determined at the point where the axial and lateral staircases met, the estimated length and rise of the flight were respectively 27.4 m. and 13 metres, giving an angle of 25 degrees.

If, as Taylor asserted, the treads of the staircase had originally, been paved with stamped bricks, they had now

entirely disappeared, and all that remained between the parapets was the *liben* filling upon which the steps and been laid. As for the paving-slabs, a few, very much weathered fragments of limestone could still be found amongst the drifted sand, but only two broken pieces corresponded in dimensions to those mentioned by Taylor. These were of fine-grained white marble of a very superior quality. Taylor's smaller pieces, pierced through the back, sound more like architectural ornament of the proto-literate period, such as were found by us elsewhere on the surface. (See Fig. 118, in the foreground). The outer faces of the staircase were also now in a very poor state of preservation. Here, as elsewhere, any pavement which originally existed had been removed, and even its position could not be exactly determined. The structure had once more been weakened and damaged by a treasure-seekers tunnel.

At the base of the staircase, where Taylor had discovered his column-base, there was now the most discouraging accumulation of sand. This, however, after some days work, we were able partially to remove, only to find that the column base was no longer there. Having been left by Taylor on the surface, it had doubtless been removed or destroyed by later visitors to the site. In spite, however, of the obscurity of Taylor's quaint lithograph, in which he depicts the staircase, the position in which it stood is fairly clear, since part of the casing of the second column, also mentioned by him, still remained *in situ*, it was most curiously composed of white gypsum plaster, in which were embedded chips and splinters of various-coloured marbles. In the photograph (Fig. 17), it may be seen to the right, lying on the surface, after it had been removed in order to examine other shapeless lumps of gypsum which lay beneath it. As may also be seen in the picture, an extension of this sounding encountered, beneath the gypsum, the *liben* walls of a small but interesting building. Since it was founded on and buried in sand, only a part of the plan could be recovered; but this was sufficient to show that its facades were ornamented with buttresses and recesses, and that there was a niche-recess in the centre of the end wall. One jamb survived of an entrance door, where the workman is standing in the picture, and all the inside faces of the walls were decorated with clean, white gypsum plaster. Since the cone-mosaics, incorporated in Taylor's column-base must be taken to suggest a proto-literate date, this building would perhaps belong to the early Uruk period. Both are separated from the actual structure of the ziggurat staircase by scanty remains of an intermediate period, when the site subsequently occupied by the ziggurat was



FIG. 17

merely a conical hill. On the trodden clay of its sloping surface, low sleeper-walls of plano-convex **liben** had been built, perhaps marking the approach to some simple shrine at the summit. One of these can be seen beside the boy squatting in the background of the picture.

The Lateral Staircases

The baked-brick facing of the ziggurat on the front or southeast side, had a foundation 3 courses deep, offset 35 cm. from the main face. The baked-brick retaining-walls of the lateral staircases, 100 cm. thick,

were constructed at a distance of 2.5 m. from the facade, and the space between filled with large square **liben**. On this the baked-brick treads of the stairs were no doubt laid, but they had by now entirely disappeared. Unlike the facade itself, the face of the stairways had no buttresses and recesses, but appeared to be "battered" at the same angle. The outer faces of the axial staircase were of course vertical. The retaining-walls of all three stairways seemed to be without foundations. A mass of limestone boulders, which were exposed beneath the wall at one point, proved to be merely the filling of an earlier tunnel, cut by treasure-seekers.

C. Buildings of the Uruk & Protoliterate Periods

Early Uruk Temples

At the conclusion of the first season's excavating, it was provisionally decided that the three concentric rectangles of **liben**, representing three successive extensions of the Temple VI platform, should be attributed to the Early Uruk period. There was no conclusive archaeological confirmation of this attribution, since the character of the liben was not distinctive, and we neither found nor could expect to find any pottery or objects associated with it. In fact, the only evidence in support of the theory was as follows. The fifth extension, or terrace, which came to be known as Temple I, could, as will be seen later, fairly safely be dated to the Protoliterate period, whereas the fourth extension (Temple II) was similarly built in limestone and gypsum plaster. Since Temple VI was now known to belong to a very late, if not the final stage of the Al'Ubaid period, Temples III, IV and V must be taken to represent a stage intermediate between this and the stone architecture of the Protoliterate age.

It will at once be noticed in Fig. 10 that the outline of the first two **liben** extensions of the platform (Temples IV and V) are represented by wavy and irregular lines. This is due to the fact that the faces of these platforms are built with a sharp "batter", or inward slope, and as their outlines are plotted on the undulating surface of the mound, (after the articulation of the individual bricks), they could naturally not be expected to run true. The slope and general appearance of the battered faces of the successive platforms, can best be seen in Fig. 18, where a cross-section has been cut through them, and the batter carefully traced. This test also revealed that the ground level at the base of the platform seemed to have varied very little throughout the period. Little further need be said about Temples III, IV, and V, except that, in the absence of a traceable plaster face to the platforms, the only factor which enabled us to distinguish them at all, was the very marked difference in the size and colour of the **liben** used.

Particulars of the bricks are as follows:

Temple III. Small bricks of reddish clay.

Sizes: $21 \times 12 \times 7$ cms.

Temple IV. Medium sized bricks of greenish clay.

Sizes: $29 \times 12 \times 8$, $26 \times 13 \times 7$ cms.

Temple V. Large bricks of light-coloured clay with dark joints.

Sizes: $42 \times 20 \times 8$, $41 \times 22 \times 8$ cms.

The corners of the platform, in all cases seemed to have been rounded.

Building in Square H/5

This building was located about ten metres inside the southeast retaining-wall, and, like the "portico" building, was oriented towards a point directly beneath the centre of the ziggurat. On account of its formal architecture and the total absence of any normal domestic debris or objects, it was designated in our preliminary report as a "non-secular" building. Its most striking characteristic, however, was the good state of preservation in which the actual walls had survived. This circumstance was clearly due to the fact that, in a very short space of time after its final abandonment, the rooms had become completely filled with drifting sand. Since no smallest trace was found, either at the last occupation-level or in the sand-filling, of debris from a fallen roof, it seemed to us by no means impossible that the drifts had entered through the doors and windows, and the process of filling had been completed while the ceilings of the rooms were still intact. In our own experience of sandstorms at Eridu, we had seen a dune of sand more than two metres high accumulate behind our expedition-house as a result of a single storm.

Long after the final disappearance of its roof, the sandfilled ruins of our building had been sealed in with a layer of rubble, more than 60 cms thick, in order to create

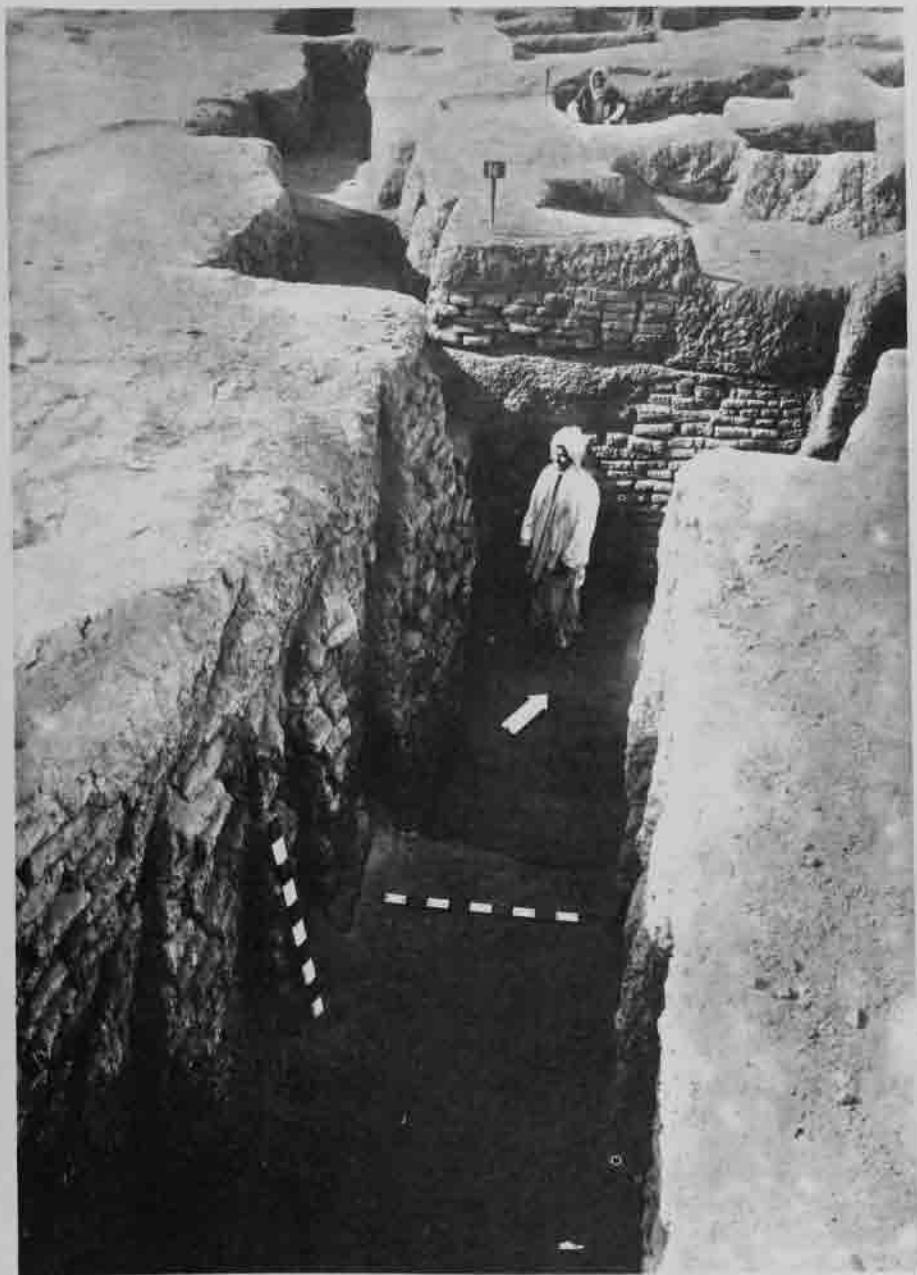
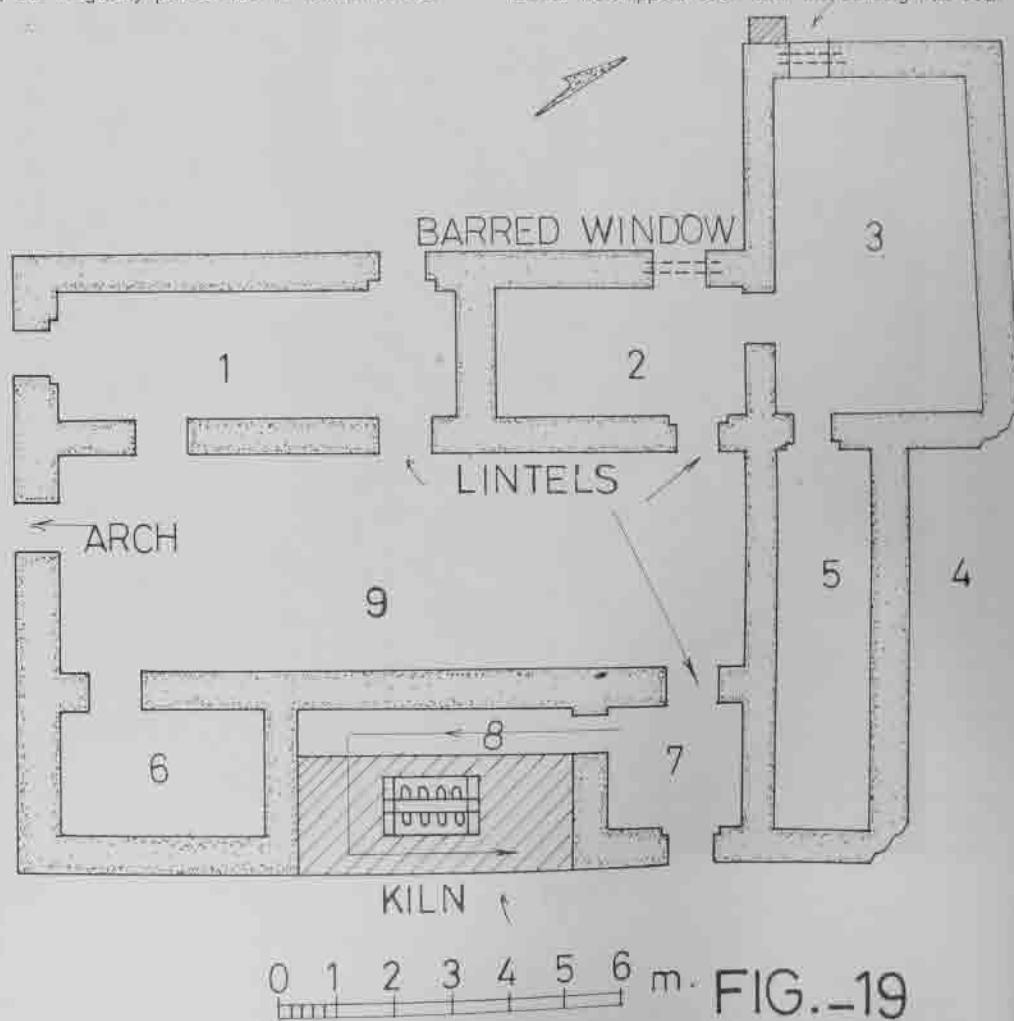


FIG 18

an emplacement for some new architectural project, and this hard crust on the summit of the mound had to be laboriously cut through, before the walls beneath could be traced. The rubble itself was obviously composed of debris resulting from the demolition of earlier buildings, and a careful examination was consequently made of its contents. They seemed for the most part to consist of the familiar pottery, cone-mosaic ornament and small, placemade bricks of the Protoliterate period, but since there were also plano-convex bricks and pottery dating from as late as the Akkadian period, the beginning of the Third Dynasty of Ur could be fixed as the earliest date at which the emplacement could have been laid. This computation was confirmed by the presence, at several points in the rubble, of kiln-baked bricks bearing the stamp of Amar-Sin. They were regularly laid, in small stacks, but irregularly placed both in relation to one

another and to the alignment of the building beneath, as though intended to serve as foundations for some particularly heavy structure above.

The walls of our building were of reddish *liben*, having average dimensions of $30 \times 18 \times 8$ cms. They were covered with two coats of greenish plaster, and brought to a smooth finish with a fine layer of reddish clay. The pavements in all rooms were similarly finished in smoothly laid, reddish clay, and though, at two points in the entrance vestibule, there were traces of a fire having been lighted, the pavement must afterwards have been swept clean; for there was no litter of potsherds or other debris, such as one would expect to find in a domestic building. Lodged in the sand-filling, at varying heights, were groups of votive pottery, presumably deposited by faithful worshippers even after the building had been



abandoned. But the typology of the pottery showed that, unlike the many scores of "bevelled rim" bowls and jars with curved spouts, appearing in the filling above and dating from the Protoliterate period, these votive vessels belonged to the first half of the Uruk period. Since the earliest example of a Protoliterate bowl was found in the sand, just beneath the rubble filling, this sand may logically be taken to represent the line of demarcation between the two sub-phases of the Uruk period.

The principal chambers (Nos. 1, 2, 5, 6, 7, & 8) are grouped around a central hall (No. 9), nearly twelve metres long, which can be entered either directly from outside, or through an entrance vestibule (No. 1) (Fig. 19). One of the most striking features of the central hall was that, of the five door-ways leading to adjoining rooms, at least three had been covered by flat lintels, and

these were still actually intact. In all cases, the three small wooden joists which had supported them, had perished, and nothing was left but the holes in the brickwork into which their ends had fitted. But the actual brickwork of the lintel had remained in place, supported, in the case of the door to room 7 (see Fig. 20), merely by the sandfilling. The sixth doorway, which occurs in the southwest end wall, was equally interesting; for here, in the place of a flat lintel, there was a parabolic archway, also still completely intact. This archway, which stood 1.70 metre in height, can be seen most clearly in Fig. 21, where the removal of the plaster at its apex shows the semi-corbelled construction of the brickwork. (In the background of this picture, drifted sand can be seen filling a tunnel, made by one of the early excavators, along the outside face of the building.)

FIG. 20



FIG. 21



In the centre of the room, there was a layer of ashes in the sand, at a level about five centimetres higher than the original pavement, and beside it were the broken fragments of several votive vessels (Fig. 22). Again, at a height of 40 cm three large votive jars had been laid in the sand, against the northwest wall, between the doorways leading to Rooms 1 & 2. These were still intact, and can be seen in Fig. 23, where the Amar-Sin masonry in the filling above is also visible.

Room 1 appears most clearly in Fig. 24 where the

FIG. 22

damage caused to the upper parts of the walls by later foundation trenches can clearly be seen. There are two doors leading outside the building, both of which have reveals rebated on the inside only. That in the northwest wall has a pivot-hole for a door at the bottom of the northeast rebate. That in the southwest wall also has a socket in the brickwork, at a height of one metre from the floor, evidently to accommodate some sort of bolt for securing the door. This can just be distinguished in the general view of the building (Fig. 24). The intact lintel over one of the doors leading to the central hall can best be





FIG-23

FIG-24



seen in Fig. 25, where the socket-hole beside the entrance-door is also visible in the background. It was in this room, as has already been mentioned, that fires had been kindled at five points on the original pavement. As in Room 9, there was also a layer of ashes, a few centimetres higher, accompanied by the remains of votive jars.

Room 2 was also of considerable interest (Fig. 19). Opposite to a rebated doorway with an intact lintel, leading to the central hall, was an opening which clearly had the function rather of a window than of a door. At a height of 1.30 metre above the pavement level, it was spanned by a flat lintel, supported, as usual, on three small wooden joists. At its base, three courses of brickwork had been built in, apparently as an afterthought, to form a sill, and it was protected by seven strong, horizontal bars of wood, whose socket-holes

could be seen in the brickwork of either reveal (Fig. 26). The original clay floor had traces of fire, and there was some ash in the sand filling at a height of 60 centimetres above it.

From Room 2 a second doorway led to Room 3, a large chamber, projecting some metres forward from the northwest facade of the building (Fig. 24). This room also had a barred window, of a smaller size, in the northwest wall. It also had a doorway with a single rebate for the door, leading to a long storage-chamber (No. 5). In the eastern corner, the plan of the building must have been completed by a second similar storage-chamber (No. 4) accessible from outside. But circumstances made further excavation at this point impracticable.

Of the remaining chambers, Room 6 had no particular character. Room 7 was merely a vestibule, leading to the central hall, from an entrance at the back of

FIG. 25



FIG. 26



the building; but, approached from Room 7, through an arched doorway, which was again partially intact, was a chamber (Room 8) of a very complicated character (Fig. 19). It had no southeast wall, and appeared to have been open to the air on that side. The northwest half of the room was occupied by an earthen ramp, starting from the door and rising about one metre. But on the southeast side, where one would have expected the ramp to return

in the opposite direction, there was a level platform on which stood the ruins of an elaborately constructed kiln. This structure, whose remains can be seen in Fig. 27, 28 & 29, was sufficiently well-preserved to show the principle on which it worked. The fire-chamber, which remained intact, was spanned by a succession of arches, between which the flames rose, passing through ducts to the baking-chamber above. The baking-chamber itself

FIG. 27

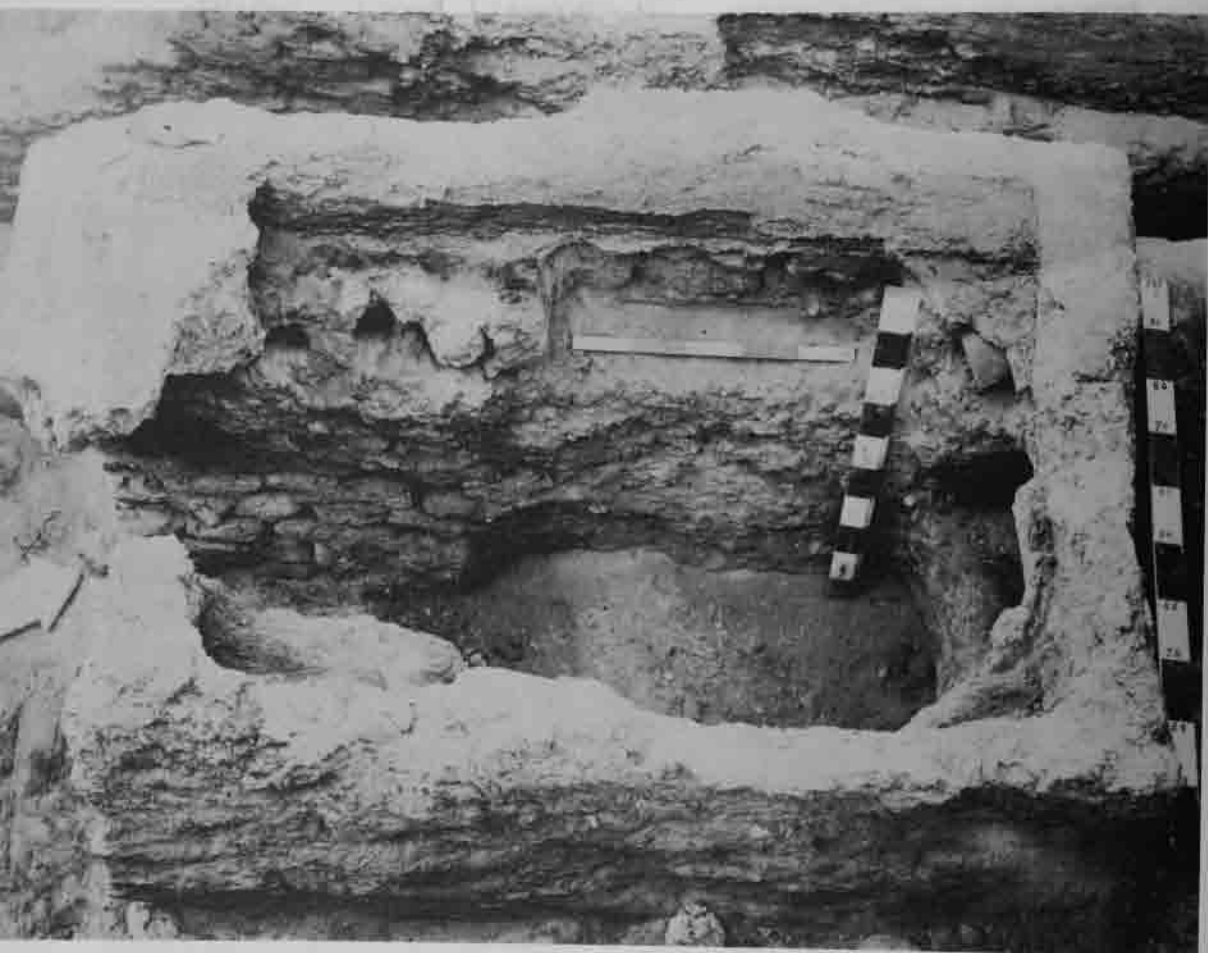


appeared to have been lined with bitumen, though this need not necessarily be taken to mean that the melting of bitumen was the purpose of the kiln. Behind and around it, was a considerable accumulation of complete and fragmentary votive vessels; but again, the circumstances made it extremely unlikely that they themselves had been baked in the kiln. They were the usual jars and bowls

FIG. 28

found elsewhere in the sand filling of the building, in which offerings were made, and it seemed to us considerably more probable that it was their original contents which had been burnt in the oven; that, in fact, the purpose of the kiln was the incineration of surplus offerings, in a manner such as we have already observed to have proved necessary in the Al'Ubaid temple (Temple VI).

FIG. 29





The Protoliterate Period

With the architectural remains of the Protoliterate period, we reach one of the most intriguing, as well as the most disappointing aspects of our entire researches. For the shrine of Enki at Eridu must, during this phase, have been as magnificently built and as richly appointed as at any time in its history. Yet, owing partly to the commanding position which it occupied on the summit of the old mound, and partly, perhaps, to the neglect of its ruins during a temporary abandonment of the site, all that is left to us are its foundations and retaining-walls, while even of these a large proportion are buried beneath the massive masonry of the Third Dynasty ziggurat. Testimony to its architectural beauty, as well as to the variety and elaboration of its ornament, is fortunately plentiful, but the treasures which it contained can only be estimated from the longevity of the tradition concerning them. More than a millennium after the building had fallen into disuse, this tradition induced some Mesopotamian prince to spend untold time and labour, in trenching and tunnelling beneath the accumulated remains of later periods, in a fruitless search for its legendary treasures.

The first actual structures, discovered during our excavations, which could be confidently attributed to the late Uruk period, were those provisionally designated "Temples I & II", namely, the heavy revetment of the platform in limestone and gypsum, and the wide terrace in the same material subsequently annexed to it. Yet it was early discovered that, on the northwest side, both these structures terminated abruptly, on a line a little beyond the face of the ziggurat, which must have represented some structure, already existing, when they themselves were built. This created an impression, (afterwards confirmed by circumstances discovered in the upper Al'Ubaid levels), that the outline of the platform was more extended and complicated than the simple rectangle, suggested by the section which we had already discovered; that our temple was not, in fact, the only building occupying its summit, and that another, and possibly more important one was likely to be located approximately beneath the centre of the ziggurat. Consequently, like the treasure-seeking prince before us, in our second season we spent a good deal of time in searching for such a building beneath the denuded remains of the Third Dynasty. The results were a single wall of gypsum bricks, and a conviction that the continuation of the search was impracticable.

Temple II

The "Temple II" revetment was built up against the unplastered *liben* face of Platform III. It was constructed of limestone boulders, with a maximum diameter of about 50 cm. laid in gypsum mortar, and its outer face had a smooth plastering of gypsum. It was the head of this structure, projecting a little above the surface of the mound, which Campbell Thompson saw and photographed. He also dug a pit on its northeast side by cutting through the *liben* of the earlier platforms, but could not go deep since it was adapted to the "batter" of Platform III, and consequently leant sharply inwards. We ourselves endeavoured to test the depth of the gypsum-plastered outer face but, after descending about two metres, were prevented from going further by the difficulty of removing the heavy boulders of which the later terrace was constructed.

To the southeast, the revetment was traced up to a point where one would have expected the corner of the platform to occur. But here there was a deep cavity, made by one or other of the early excavators, and only a confusion of loose stones remained. It was just possible, however, to trace the inner line of the actual masonry, continuing for some seven metres in a southeasterly direction, and then curving inwards in a wide arc. It appeared to us conceivable that some sort of ramp or stairway, for approaching the platform, might once have existed at this point. The western corner of the revetment could easily be found, since it remained standing to a height of nearly half-a-metre above the Temple I terrace. Its northwest face could also be followed, up to the point already mentioned, where it stopped against an earlier structure. Here the corner could be located, and a gypsum plastered face returned at a right angle.

The fact that this Temple II revetment pre-dated the Temple I terrace seemed to be proved by the fact that the terrace was built up against its carefully plastered face. From the level of the terrace pavement upwards, this face must have remained exposed during the Temple I period.

Temple I

One of the most extraordinary aspects of the terrace-structure associated with Temple I, was the immensely long time during which it must have remained standing

and even in use. For, at least a thousand years after it was built, it had been re-paved with broken bricks, bearing the stamp of a Larsa king. This circumstance at first made us naturally disinclined to date it earlier than the historic period, yet, as will presently be seen, the evidence in favour of its allocation to the Protoliterate eventually appeared overwhelming. Our reasons for calling it a "terrace" are obvious. Its pavement occurred at a level which must have been several metres lower than that of the contemporary platform, represented by the Temple II revetment. The *liben* masonry, even of Platform V remained standing up to the ziggurat foundations, which occur 2.50 metres above the terrace pavement, while one would reasonably expect a slight rise in the occupation-level of the temple itself, to have corresponded to each successive extension of its platform.

The masonry of the terrace consisted of limestone

boulders, rather larger than those used in the Temple II revetment, and the treatment of its outer face was extraordinarily interesting and ingenious. It was stepped outwards at an angle of 30 degrees, in small offsets, about 15 cms. wide, the face itself being composed for this purpose of small roughly squared blocks of a special pinkish stone, laid in courses also about 15 cm. deep. The stepped face was then plastered with gypsum to give a finished effect. Upwards from a point about 2.00 metres beneath the pavement level, the stepped face abandoned its normal alignment and assumed a wavy or undulating line (Figs. 30 & 31). The undulations had a depth of 25 cms and occurred at two-metre intervals. The whole structure appeared to be strengthened with a thick layer of bitumen about every ten courses. The only possible indication of the purpose for which the upper part of the terrace retaining-wall had been given this undulating effect, was afforded by some very fragmentary remains of

FIG.: 30





FIG. 31

masonry, still existing at the only point where the facade had survived up to the pavement level. These suggested that the face of the building, from the pavement level upwards, had been divided into a succession of wide, semicircular half-columns, such as occur in the famous "Mosaic Portico" of the Proto-literate period at Warka. The undulations in the upper part of the retaining-wall would then merely be an adaptation to the treatment of the facade above. If this were so, the half-columns must have stopped about five metres short of the western corner of the building, for the last undulation in the retaining-wall occurs at this point.

The small section of the Temple I masonry, on the southwest side of the building, which had survived to a height of a few centimetres above the level of the terrace pavement, was also sufficient to establish unequivocally the fact that enclosed chambers had stood upon the terrace. This, of course one would have expected, since

the facade with half-columns could hardly have been a mere parapet. But, in addition, it was now possible to trace two sides of a chamber, four metres wide, of which the third side was formed by the plastered face of the old Temple II revetment. The thickness of the wall at the northwest end, which must have separated it from a similar adjoining chamber, could not, unfortunately, be determined, owing to the interference of an earlier excavation. Here again, there was evidence that the terrace chambers had survived for an astonishingly long period, for in the western corner of the one which we had traced, a low platform, measuring 1.00 x 1.50 metres, had been constructed of baked bricks, bearing the name of Amar-Sin, king of Ur. Broken bricks of the same sort had, as we have already mentioned, been used to repave sections of the terrace on the northwest side. Here also, chambers must have existed, since the end of a partition-wall was still to be seen, projecting at a right angle

from the Temple II revetment; but they must have been considerably narrower, owing to the terrace on this side having a maximum width of only four metres. The end chamber had been packed with heavy boulders to support the face of the ziggurat, where it overlapped the terrace.

At the time when the Temple I terrace was built, the site on which it was to stand must have sloped sharply to the southwest, for, whereas the northwest retaining-wall, at the ziggurat end, was founded hardly three metres beneath the level of the terrace pavement, at the western corner we followed its stepped face down to a depth of nearly 5.15 metres, without reaching the bottom. It proved impracticable to descend further, simply because the area outside the terrace had, at some later period, been built up with a filling of loose boulders and gypsum, whose removal would have required more labour than we had at our disposal. It was this filling, however, which produced most important evidence for the dating of Temple I. It appeared to have been laid in three stages, and at the completion of each stage to have been roughly levelled. But at no stage in it, within the limits of the very large cavity which we excavated in tracing the western corner of the terrace, did we find the smallest fragment of baked brick, to suggest that it had been laid during the historical period. On the contrary, we collected from among the boulders, of which it was composed, an assortment of familiar architectural objects, which were sufficient to convince us that this rubble was derived from the demolition of the Protoliterate temple itself. Most of these objects were mosaic-cones, such as have never, up till now, been found in use in any period later than the Protoliterate. They were of two principal types both varying in length and diameter from 15-6.5 cms & 6.6-5.2 cms. One was of gray stone with the circular head worked smooth: The other type was cast in white gypsum, and the flat surface of its head covered with fine copper sheeting. About a score of examples of each type were found, and in the case of the latter, in spite of oxidization, the frail leaves of copper almost invariably remained, still clinging to the gypsum (Figs. 118 & 119). This could hardly have been the case, unless they had been transferred straight from their place in the ornamental facade of the building, to the rubble filling, for which its dismantled masonry was now to provide material. It could therefore be assumed that the laying of this outer filling corresponded in time to the demolition of a Protoliterate temple, whose delicate architectural ornament was still intact. Other objects found among the filling, consisted for the most part of pottery fragments, such as curved spouts

and bevelled bowl-rims, which could satisfactorily be attributed to the later half of the Uruk period.

At the ziggurat end of the Temple I terrace, a considerable effort was made to investigate the already-existing structure against which it had been built. It appeared to consist of a rough retaining-wall, supporting a filling of mudbrick and sand. About two metres of its face was traced, curving sharply to the north. But it was then interrupted by an enormous treasure-seeker's tunnel, penetrating the ruins obliquely, and disappearing beneath the foundations of the terrace. Some twenty five metres to the northwest, however, we afterwards encountered the broadly rounded corner of a platform-face or retaining-wall, on approximately the same alignment. And, since its well-laid stone-work was strengthened every few courses with a thick layer of bitumen, in exactly the same manner as the Temple I terrace, we assumed it to be contemporary. The northwestern face of this structure was again picked up at two points beneath the denuded remains of the ziggurat, and its northern corner located on a line with the northeastern face of the latter. We therefore appeared to have been right in thinking that the platform of our Protoliterate temple had been extended to support another, equally important building, subsequently displaced by the ziggurat.

As has already been stated elsewhere, our efforts to discover actual traces of such a building beneath the ziggurat were, in the end, almost completely frustrated, partly by the toughness of the Third Dynasty masonry, and partly by the utter confusion resulting from the treasure-seeker's tunnels. The only structure of any interest which did eventually come to light, appears in Fig. 32. It is a wall two-and-a-half metres thick, standing to an average height of a little under a metre and built entirely in small bricks of white gypsum (sizes: 42-45 × 10 × 10 cms., 22 × 10 × 10 cms.). It is prolonged to the southwest by a narrower wall of the same material eventually returning at a right angle to the northwest. A further prolongation appeared to be the face of a mudbrick retaining-wall, evidently belonging to an earlier period, since a flight of **liben** steps (Fig. 33), which led up to it, were partially covered by the returning section of the gypsum wall. The discovery of the gypsum wall in antiquity seems to have stimulated the treasure-seekers to a positive fever of activity; and a glance at Fig. 34 will give some idea of the tangle of tunnels and pits which resulted. Tunnels passing along both sides of the wall and burrowing beneath it, had, as usual, been refilled with brick-debris from the Third Dynasty ziggurat, and where

two tunnels met, creating a spacious cavity, whole bricks had been used, laid in regular courses. If, under these circumstances, we had wished to continue our investigation of the gypsum building, it being impossible to remove the ponderous mass of the ziggurat masonry above, we should have been compelled to add our own quota of tunnels to those already existing. This expedient appeared obviously impracticable.

At one point on the southwest side, an experimental
FIG. 32

tunnel was actually dug, at the level of the ziggurat foundations, in order to see whether, when they were laid, any earlier walls had been incorporated in the structure. It was abandoned, after penetrating about twelve metres into the solid brick work, with no more important result than the discovery of a few isolated fragments of gold leaf. For the rest, the conspicuous appearance of the gypsum wall, after the rains had washed it clean, alone testified to the magnificence of a once monumental building.





FIG. 33



FIG. 34

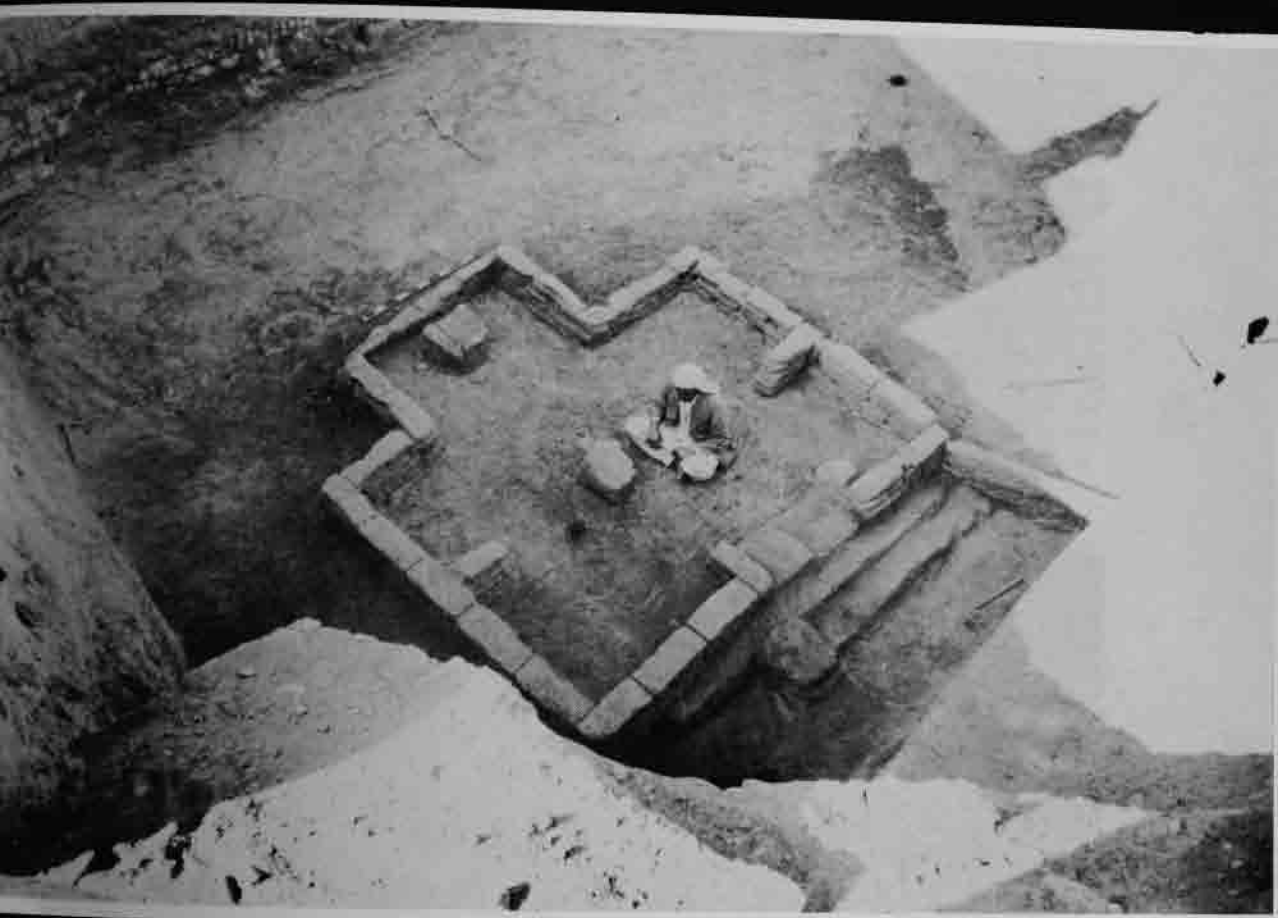
The Portico

In Squares EF/4 is situated an oblong building running parallel to the northeastern side of the ziggurat at about 35 metres from it and at a distance of an average of 10 m. from the retaining-wall (Fig. 3). This building, 15×9.7 m., is divided into three long chambers (13.8×1.9 m.) preceded on the southwest by a roofed space which served as a passage to two symmetrical entrances leading to the interior. Each chamber has three entrances leading to the next chamber (Fig. 35). The highest remaining walls are at the centre of the building, being of maximum height of 80 cms. Later, the middle entrance in the second

FIG. 35

chamber was blocked, and partition walls were built, dividing the first and third chambers, each into two rooms. The whole building was found buried gradually in wind blown sand, similar to the situation in which the Uruk Building in Square H/5 was found. Religious offerings were deposited in this building, mostly jars of buff ware with wide spouts, and hand made votive bowls in coarse generally reddish ware, in some of which were found fish bones. These bowls are not of bevelled rim of usually fairly early Uruk period. We are more inclined to think that this portico should be little later than the Uruk Building in Square H/5.





D, Prehistoric Temples

Earliest Traces of Building

The first traces of human occupation at Eridu, occurred at a level corresponding to 11.70 metres beneath datum, where the clean sand, at the summit of the dune on which the settlement was founded, was mingled and pitted with habitational debris (Fig. 36). Approximately 30 centimetres above this, we encountered the earliest brick walls. They were built of neatly made rectangular *liben*, somewhat long in proportion to width, and showing signs of being tempered with straw. The average dimension was $50 \times 25 \times 6$ cms. There were four, approximately parallel walls, half a metre apart, having a maximum length of three metres. Their purpose might well have been merely to provide some sort of stable emplacement on the loose sand and debris. These walls were associated with a period of occupation, designated by us as Level XVIII. They remained standing to an average height of 16

cm. and, directly above, at Level XVII, were the remains of the earliest recognisable building. This was a square chamber, with an inside dimension of 2.80 m. (Figs. 37 & 38). The walls, which were built of *liben* corresponding in type to that of Level XVIII, had a width equal to the short dimension of a single brick, and were unplastered. No door could be located, and it was assumed to have occurred in the northern corner of the building, where a large section of the walls, had completely disappeared. In the centre of the chamber was a small, square pedestal of *liben*, standing to a height of 20 cm., and in the centre of the southwest and northwest walls there were projections, equal in size to half a brick, which, at ceiling level, might have provided a seating for wooden beams. Near the southern corner of this building, were the remains of a circular structure, 1.30 m. in diameter, which was shown by the presence of ashes to have been some sort of kiln or oven. One corner of another similar building occurred within the limit of the sounding to the northwest.

FIG. 36





FIG. 37

FIG. 38

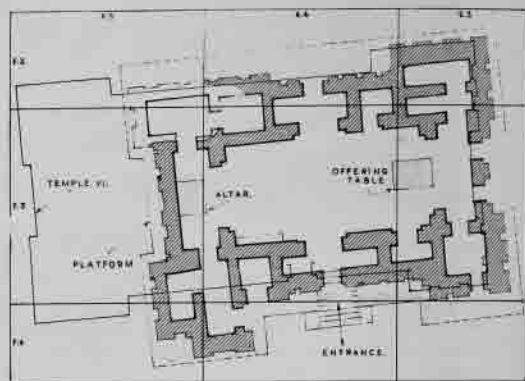


Temple XVI

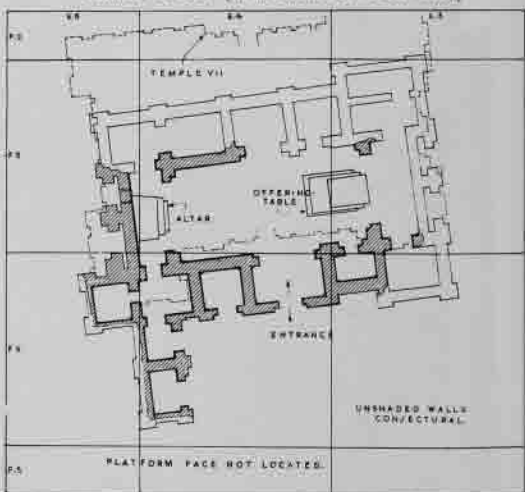
The so-called "temple" at Level XVI (10.90 m. beneath datum) was built directly upon the ruins of the building just described, and may probably be taken to be a reconstruction of it, on slightly more sophisticated lines. The walls were of well-tempered *liben*, whose average dimensions were $54.32 \times 20 \times 6.7$ cm., and their thickness corresponded to the width of a brick. They showed traces of having been plastered inside. The main part of the chamber was rectangular, measuring 2.10×3.10 m. inside (Fig. 39). In the northwest wall there was a recess, measuring 1.10 m. wide 1.00 m. deep, in which stood a small *liben* pedestal, 24 cm. high. Another similar pedestal occurred in the centre of the main part of the chamber, in this case, bearing traces of fire and being surrounded by a conspicuous deposit of ashes (Figs. 40 & 41). The doorway was placed, off-centre, in the southeastern wall, and its jambs were strengthened by projections of the brick-work inside. There were also projections, equal in dimensions to a single brick (40 cm. long), in the centre of the southwest and northeast walls, almost certainly for the purpose of supporting a main ceiling-beam. To the left, as one approached the doorway from outside, a fragment of brickwork had survived, which might have been a third pedestal. To the right, a narrow wall was built against the east corner of the building, and, near the south corner, a new circular kiln had been built, exactly resembling that in Level XVII. The occupation-level corresponding to Level XVI was extremely rich in painted pottery, especially in the neighbourhood of the entrance-doorway. But there were few other objects of interest.

Temple XV

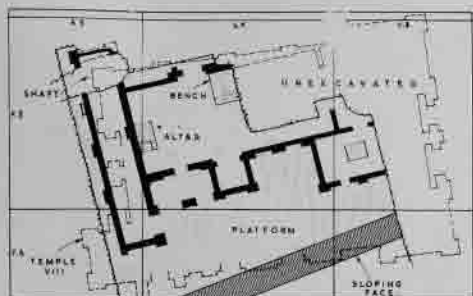
The identification of the building found at Level XV as a temple, depended largely on the fact that it had obviously been built to replace Temple XVI. All that remained were two complete and two fragmentary walls of a rectangular building, whose inside dimensions were 7.30×8.40 m. and a fifth wall, parallel to one of these, at a distance of half a metre, on the northwest side. The building-material in this case was a very unusual type of *liben*, not encountered elsewhere in the entire range of temples. The bricks were hand-made, apparently without any kind of mould, almost square in section and very long in proportion (average dimensions: $40 \times 14 \times 8$ cm.). They were indented on the upper surface with a row of about 5 holes, made with the knuckles of the right hand,



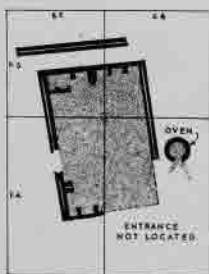
TEMPLE SEVEN [WITH OUTLINE OF TEMPLE SIX]



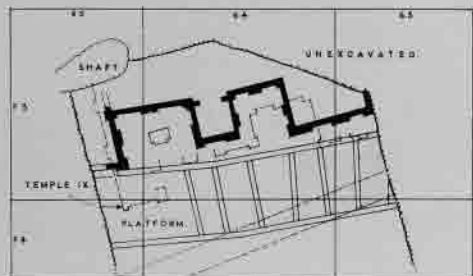
TEMPLE EIGHT [WITH OUTLINE OF TEMPLE SEVEN]



TEMPLE NINE



TEMPLE FIFTEEN.



TEMPLE TEN.

SCALE 0 10 20 METRES

TEMPLE ELEVEN



TEMPLE SIXTEEN.

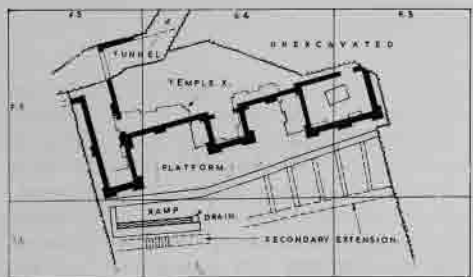
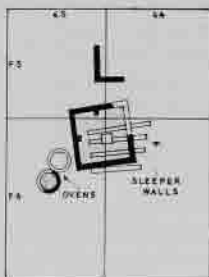


FIG. 39



TEMPLE SEVENTEEN.

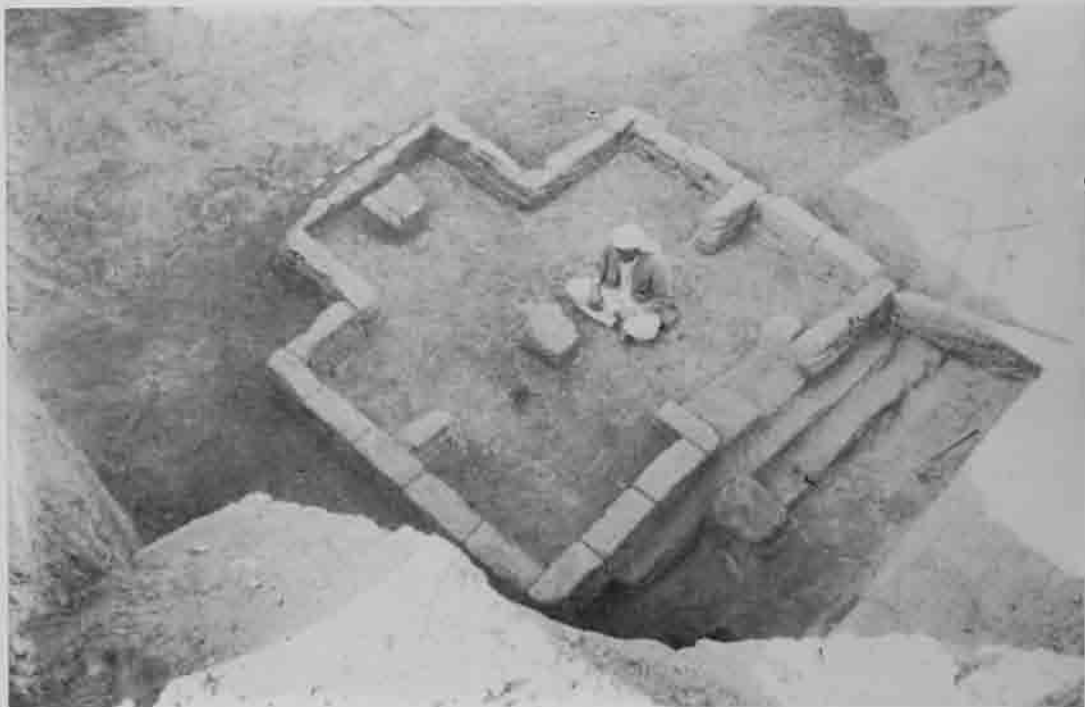


FIG. 40

perhaps to serve as a "key" for the mortar. The northeast and southwest walls were composed of two "shells" of these bricks, which, since they were inadequately bonded together, had fallen some way apart, leaving a space between. The northwest and southeast walls, on the other hand, were only a single brick thick, and required to be supported inside by a succession of small, projecting buttresses. The parallel wall, two bricks thick, on the northwest side, suggested that the buttressed wall did not represent the limit of the building in this direction. There was a doorway in the southwest wall, with rebates inside for a door. Apart from a small compartment in the west corner, enclosed by a narrow wall, the plan had no other comprehensible features. The usual circular kiln was, however, recognisable, outside the building on the northeast side.

The ruins of Temple XV had subsequently been packed out with the same *liben* of which its walls were built, in order to provide an emplacement for a new building, of which no traces were left. In our schedule of levels, this filling was designated as Temple XIV. It

appears very clearly in Figs. 42 & 43 in which the shape and peculiar indentations of the *liben* can also be seen.

Temples XII & XIII

After Temple XIV, there were two successive occupation-levels at which no traces of actual buildings were to be found within the area of our sounding. If, indeed, a temple had been rebuilt at these two periods, it must have been sited some distance to the northwest, and the only evidence which we could find of its existence was due to a chance circumstance. The treasure-seekers of a later age had here sunk a deep shaft from the surface, and from its base, had directed a tunnel northwards beneath the ziggurat. We followed this tunnel for a short distance, and, in the process came upon a *liben* wall, corresponding to Level XII. This could not, of course be traced further owing to the congested conditions in the tunnel; but it was possible to observe that it was buried in clean sand, and, since in Level XI the temple was again resited, it was possible to imagine that



FIG. 41



FIG. 42 A

FIG 42B





FIG. 43

this sand represented a temporary break in the continuity of temple-building. The significance of this break, in relation to a contemporary change in the pottery, will be enlarged upon elsewhere.

Temple XI

Unless the **liben** filling of Temple XV can be considered as intended to form a raised emplacement for a new building, Temple XI provides the first instance of a temple building being deliberately raised upon a platform. The platform itself was not, indeed, constructed of solid brick. The impression which one received was that a containing-wall had been built around the sand-filled ruins of an earlier building (probably that encountered in the tunnel), and supplementary filling added, until a level emplacement was obtained. The southeast face of the platform thus created fell within the area of our sounding, and its function was confirmed by the discovery of a formally constructed ramp, leading up to it from the lower level. Supported on the outside by a parapet-wall 35 cm. thick, it rose from ground-level to the height of the platform (100 cm.) in a distance of 4.50 m. Its width was 1.20 m., and on the outside there was a narrow channel to carry rain-water down to a small, circular sump at ground level, a measure so often found to have been adopted in buildings of later ages, as, for instance in the case of the stairways approaching the platform of the "Painted Temple" at Uqair²⁵.

It was at first puzzling, but afterwards interesting to find, that the platform of Temple XI had, at some secondary period been considerably extended in size. Here again, the extension was not of solid brickwork. A more economical expedient had been resorted to, which consisted of building a skeleton of narrow, unplastered sleeper-walls, and filling the space between them with rubble. At the time of the extension, the old ramp had been eliminated, and very scanty traces remained to show that a stairway of brick had been built to take its place (see Fig. 44. A & B):

Possibly the most striking feature of the building which stood upon the platform just described, is that it is the first in the series which can without any reasonable doubt be called a temple. The alternative buttresses and recesses, with which the outer faces of the walls were

ornamented, would, in themselves have been sufficient evidence. The walls were constructed of long, rectangular **liben**, with average dimensions of 52 × 27 × 7 cms, their thickness corresponding to the width of a single brick. Partly, perhaps, owing to their general fragility, they remained standing to a maximum height of 85 cms. only. The function of the plan was by no means easy to understand, on account of the fact that more than half the area of the building occurred outside the area of our sounding, and could not consequently be traced. It was possible, however, to recognise a large central chamber, with a width of 4.50 m. and a length of at least 12.60 m. This would presumably have been the sanctuary. On the southeast side were three excrescent rooms, of unequal sizes, one of which was protracted into a corridor, screening the southwest end of the sanctuary. A doorway subsequently blocked up, led from this room into the sanctuary itself. Another, the largest of the three, was accessible by a doorway from the sanctuary and provided, in the centre of the floor, with a rectangular platform 15 cm. high, showing signs of burning and surrounded with ash, which could immediately be identified as an offering-table. The third room, which was also accessible from the sanctuary, was square and extremely small, measuring only 1.70 across. Neither the sanctuary, nor any of the three subsidiary rooms contained any objects of particular significance.

Temple X

At Level X, the temple appeared to have been rebuilt with only very minor changes in the plan. Once more a platform had been constructed over the ruins of Temple XI, with its southeast face contingent to the facade of the new building, and again, for some incomprehensible reasons, it had afterwards been extended, this time nearly eight metres, by the same process of constructing a skeleton of sleeper-walls and filling the intervening spaces with rubble. (The extended platform appears in Fig. 45, where the workman in the foreground is standing beside its southeast face)

Again the walls of the temple itself were preserved only to a maximum height of about 45 cms.; and, especially in the southern corner of the building, were by no means easy to trace. The average dimensions of the **liben** were 47 × 25 × 6.5 cms. The corridor screening the

25. Ref. Uqair Publication.



FIG. 44A

FIG. 44B





FIG. 45

end of the sanctuary had evidently again existed, but it was much dilapidated, and the wall separating it from the sanctuary itself could not be located. The small square, excrescent room in the centre could be traced, and in the centre of the recess to the southwest of it, there was a large *liben* podium, with rebated corners, whose purpose could not be explained. The larger excrescent room, in this case had no offering-table, and seemed hardly to have been separated from the sanctuary itself. It will be seen in Fig. 45 that little beyond the outer walls of these chambers could actually be cleared, owing to the recession of the building beyond the limits of our sounding.

Temple IX

Various circumstances made it possible to trace rather more of Temple IX, and several aspects of the plan

could consequently be clarified. It was possible to fix the exact dimensions of the sanctuary, which proved to be 10×4.10 m., and to obtain some idea of its character (Fig. 39). Against the southwest wall, there had been an altar, of which two fragments remained built of *liben*, standing to a height of 40 cms. At the opposite end of the room, there appeared to have been a wide door on the main axis. On the southeast side of the building, there were the usual three excrescent chambers, one of which, as before, was protracted into a corridor behind the altar. This time it had an entrance from the platform at the southeast end, and almost the whole length of its buttressed southwest facade could be traced (Figs. 46 & 47). The recess in the southeast facade, separating this element from the small excrescent chamber, was provided with a central pier, in place of the curious podium, which occurred in a similar position in Temple X (Fig. 48). A kind of porch seemed thus to be formed, at



FIG. 46



FIG. 47



FIG. 48

the back of which a doorway led directly into the sanctuary at the altar end. Opposite to this door, on the other side of the sanctuary, was another, on a slightly different alignment, beside which we encountered one end of a high brick bench. The smaller excrecent chamber matched those in Temples X & XI in every respect, while the larger one was accessible both from the sanctuary and from the terrace outside, and contained an offering-table. The platform, in this case, extended three metres beyond the face of the building, and its southeast face was "battered". The walls were in most cases somewhat thicker than those of Temples X & XI.

Temple VIII

The complete change both in plan and general character of the temple, when it was rebuilt at Level VIII, will be enlarged upon elsewhere. It is here sufficient to say that the walls themselves now averaged 70 cms. thick and the building covered a considerably larger area. It will be seen from the plan (Fig. 39) that a fairly large section of the building proved inaccessible owing to its being beyond the limits of our sounding. Nevertheless, the

obvious conservatism shown by the builders of Temple VII, enabled us to restore the missing chambers with a maximum of confidence. The central element of the building was again a long, rectangular chamber, which must clearly be considered as the main sanctuary. In the centre of the southwest wall was the altar, which had remained intact, and measured $20 \times 30 \times 20$ cms. high, with a narrow step leading up to it in front (Fig. 49). A little forward from the altar, two rebated piers projected from the sanctuary walls on either side, presumably to emphasise its setting in a sort of "proscenium" opening. There was sufficient evidence to show that this architectural treatment had been repeated at the opposite end of the sanctuary, and here, by analogy with the plan of Temple VII, it was possible to restore twin doors, which must have constituted one of the principal entrances to the building. At the northeast end of the sanctuary, there was a rather large offering table built of *liben*, it measured $20 \times 30 \times 20$ cms. high, and its northeastern end was aligned with the piers of the "proscenium". As was invariably the case in other temples, the upper surface of the podium showed signs of burning, and the pavement around it was liberally covered with ashes. On the central

FIG. 49



cross-axis of the building, there was another main entrance from the terrace outside, through a small rectangular ante-room with a very wide door on the sanctuary side, and this also seemed likely to have been repeated on the opposite side of the building. In the southern corner of the sanctuary, between the "proscenium" pier and the jamb of the central entrance, a low bench or platform was built against the wall, having a projection of 50 cms. and a height of 10 cms. Along the northwest and southeast sides of the sanctuary were ranges of smaller chambers. At either end of the building these were prolonged into two projecting wings, flanking a kind of recessed portico. At the northeast end, this recess provided a frame for the twin doorways to the sanctuary which have already been mentioned, and which, at the southwest end, were matched by a pair of curious false

doorways, set forward about 30 cms. from the end wall of the sanctuary (Fig. 48). Since the niches, thus created, faced towards the altar from behind, it seemed reasonable to suppose that they had been used for some sort of ritual purpose. This theory was to some extent confirmed by the discovery in one of them of a complete spouted vessel of the "tortoise" type, whose content, consisting mainly of fish-bones, was an indication of its votive purpose.

A doorway behind the "proscenium" pier in the southern corner of the sanctuary (Fig. 50), led to a group of three rooms, two of which were included in the body of the building, while the third formed part of an excrescent wing on the southeast side, and had its own separate entrance from the terrace. Two small adjoining rooms

FIG. 50





FIG. 51

were accessible only from the terrace. A door in the western corner of the sanctuary led to another group of two small chambers, to which a third could be hypothetically added in the area disturbed by the treasure-seekers' shaft. Further rooms, in the northern and eastern parts of the building, which lay beyond the reach of our sounding, could, be reliably reconstructed on the basis of their rebuilding at Temple VII. (see plan Fig. 39).

The curious false doorways, behind the altar in

Temple VIII, and a blocked-up opening leading from one of them to the sanctuary, can most clearly be seen in Fig. 48, a photograph which was taken when all but this section of the Level VIII walls had been removed, and in which the walls of Temple IX are already exposed in the background. The contrast in thickness between the walls of Levels VIII and IX should be noted.

A group of objects, possibly architectural in character, were discovered buried beneath the pavement of the Temple VIII sanctuary, near the western corner of



FIG. 52

the altar. In some sense, they resembled the clay "nails" which are such a common feature amongst Al'Ubaid remains found elsewhere, except that their length varied from 30 to 40 cms., and they were extremely fragile (Fig. 51).

The face of the Temple VIII platform was located at one point on the southeast side. It occurred about one metre beyond the limits of the projecting wing, and apparently stood about 90 cms. high.

Temple VII

Temple VII shows no radical change from Temple VIII, and the general character of the two buildings is much the same. The walls are of the same thickness their bricks measuring $28 \times 23 \times 6$ cm., $27 \times 21 \times 6$ cm.; the plan covers approximately the same area, and has the same rooms and appointments, obviously intended for the same purposes. Only certain features, such as the false doors behind the altar, are either eliminated altogether, or survive only in vestigial form (Fig. 52).

The platform, whose height (1.5 metres) corresponded to the walls of Temple VIII surviving within it (Fig. 53) was considerably reduced in size, and, in those parts where it could be traced, appeared to be adapted in shape to the façades of the temple itself. A feature such as had not yet been recovered in the earlier temples, was the staircase leading up to the main entrance, in the centre of the facade on the southeast side. This rose from the pavement at the base of the platform, to the threshold of the door itself, in a succession of seven treads and eight risers composed of mud bricks, laid flat and plastered. The lowest three treads projected beyond the face of the platform, and small, formal parapets were constructed on either side to support them, their tops being level with the fourth tread from the bottom. Some special significance is given to this stairway, by the fact that it is almost certainly the earliest example yet found, of an architectural feature, which, from the third millennium onwards, becomes a commonplace. The entrance doorway itself had been blocked up with brickwork, perhaps when the temple was finally abandoned. The northeastern and northwestern faces of the platform could not be traced, owing to the limits of our sounding having been reached, and some speculation must here already arise, as to whether it were not considerably extended on these two sides; even, perhaps, sufficiently to accommodate other buildings. The supplementary entrances to the temple from both these directions would support this hypothesis.

On the left, as one approached the stairway, one chamber was cleared of a building, apparently constructed against the platform; at the lower level (Fig. 54). This also could not be traced further, but, on its southeastern side, a door-jamb with a pivot-stone suggests that it extended in this direction. Like its predecessor, Temple VII has a special entrance (perhaps for priests only) to the altar end of the sanctuary, through the projecting wing at the south corner of the building (Room 23, to which Room 22 is annexed) (Fig. 39). There is also a small adjoining chamber (Room 24), which is only accessible from outside the building; it is strange to observe that the doors to neither of these could be reached except by the narrow terrace between the platform-face and the wall, and that the stairway does not really serve this terrace. Room 31 is accessible only in the same way, but this may be explained by the extension of the platform on this side. Room 37 was largely obliterated by the treasure-seekers' shaft; but its doorway facing the altar, and communication with Room 36 could be traced. With the exception of Room 35, which, unlike the

corresponding chamber in Temple VIII, could be approached from outside the building, the remaining subsidiary rooms so accurately match those below, that they hardly merit further description. In the sanctuary itself, the height of the altar is 85 cms. (Fig. 55), and of the offering-table 60 cms. Two clay pavements, separated by about 40 cms., of debris, evidently corresponded to two occupation levels; and both were liberally sprinkled with fish-bones.

The **liben** used in the construction of Temple VII was very soft, containing much sand being practically untempered. Sizes varied from $27 \times 21 \times 6$ cm. to $28 \times 23 \times 6$ cms.

Temple VI

Preparatory to re-building, the walls of Temple VII were levelled to an average height of 120 cms. and the space between packed out with a harder and less sandy **liben** than that of which they themselves were constructed. The same **liben** was used to build a new platform, considerably extended on the southeast and southwest sides, to form an emplacement for the new temple. Though considerably denuded, small sections of the true face of this platform could be traced here and there, and showed that, for the first time (with the exception of Temple IX), it had been given a slight "batter", or inward slope, probably in order to create an impression of stability. It will be seen in the plan of Temple VI in Fig. 3, that, mainly on the basis of a tempting analogy with Temple VII beneath, a flight of steps has been tentatively re-constructed, leading up to the lateral entrance. Its existence, however, could not be authenticated, owing to the denudation of the mound, which greatly hampered the excavation of the temple itself, and, in the end, made the complete recovery of its plan impossible.

The exact extent of the denudation, is indicated on the plan by a broken line, running across the building in a curve from the southern corner of Room 21 to the north corner of Room 10. Walls to the north of this line actually remained standing, their height varying from a few centimetres in its immediate vicinity, to more than two metres at the northern corner of the building. Only at the southwest end of Room 18, a hiatus is caused by the ancient treasure-seekers' shaft, which has already been noticed in the deeper levels. South of the line, the walls marked in full black could be inferred from the alignment of their foundations which still existed. The altar, which probably required no foundations, is suggested by a



FIG. 53

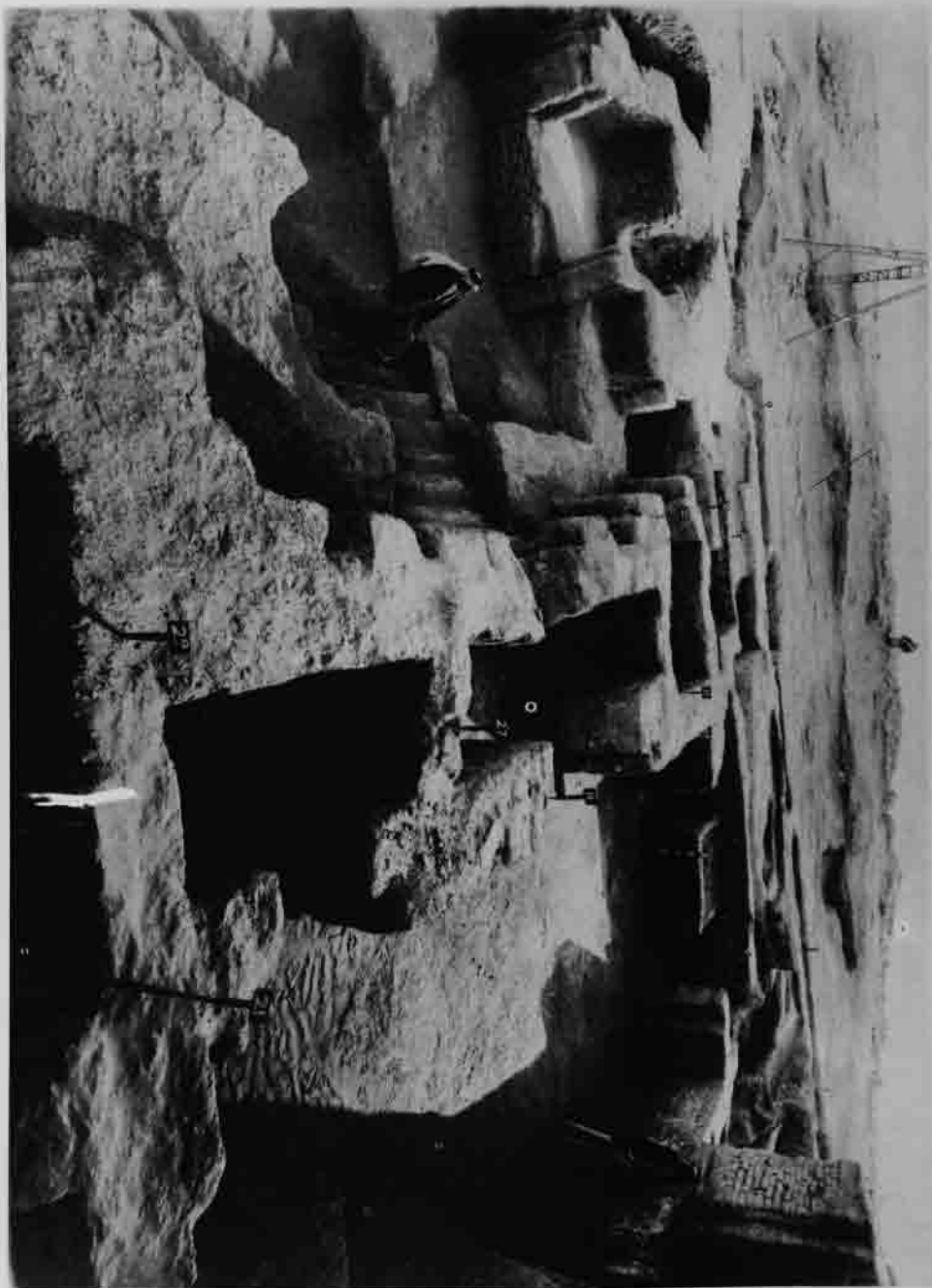


FIG. 1A



FIG. 55

dotted line, and the doors to Rooms 9 & 10 are equally hypothetical being restored to match those in Temple VII. It seemed particularly regrettable that Rooms 9 & 10 should have been denuded to below their occupation level, since, in temples of this sort, it is just these small rooms, adjoining the altar which usually contain remnants of cult objects. In Room 12 pavements belonging to two occupation-levels were preserved over about half the area of the floor, and from them we recovered a group of carnelian beads and several important pottery fragments.

It was the existence in Temple VI of these two occupational levels, about twenty centimetres apart, which proved the most important circumstance for purposes of dating the building. Both were marked by

pavements of fine clay; and it could therefore be considered that, wherever the upper one was intact, the debris between the two could be considered as archaeologically "sealed" evidence. The whole of the pottery from the earlier occupation-level was therefore retained, for the purpose of examination, and a careful statistical assessment subsequently made. This revealed that, in addition to complete pots, the whole of the 624 sherds, were either unmistakably of the Al'Ubaid period, or could be considered in the Al'Ubaid tradition, while no single fragment had been found, which could conclusively be dated to any later period. This, then, being the latest temple which can confidently be attributed to the 'Ubaid period, the details of its plan are of the greatest possible interest and merit careful examination.

The central sanctuary is an extremely long chamber, measuring 14.40×3.70 m. (Fig. 56). At either end, rebated "proscenium openings" form small vestibules, which are really merely extensions of its length. In the southern corner there is a low "bench", reminiscent of those used for votive statues in Sumerian temples. A pair of deep niche-recesses in the short wall at the northeast end, are vestigial survivals of the twin doors in Temple VIII, and must almost certainly have been repeated at the opposite end behind the altar. Set in the "proscenium opening", also at the northeastern end, is a podium of solid mud-brick, measuring 1.60×90 cms., with a height of 65 cms. (Fig. 57). Heavily coated with plaster, its upper surface was burnt dark red, and covered by a considerable deposit of ashes. Behind the podium, and slightly off-centre, a deep, oval-shaped basin stood upon the lower pavement, roughly constructed of clay and plastered inside.

Here, more than anywhere, there were reasons for assuming that the podium had had the function of an offering-table. Mixed with the ashes, which lay upon the floor all round it, were large quantities of fish-bones while a deep deposit of such bones, mixed with those of small animals, extended over almost the whole of the northeastern end of the sanctuary. They lay thickest at the edge of the pavement, and — a phenomenon which we at first found puzzling — where the base of the wall had become worn or damaged before replastering, the deposit extended beneath both coats of plaster, and some centimetres into the actual brickwork beyond. There were also fish-bones among the ashes on the top of the podium and in the debris which filled the clay basin beside it. It was, in fact, only possible to interpret them as offerings brought to the temple, and, since the complete skeleton of a fish was never found, and coherent groups

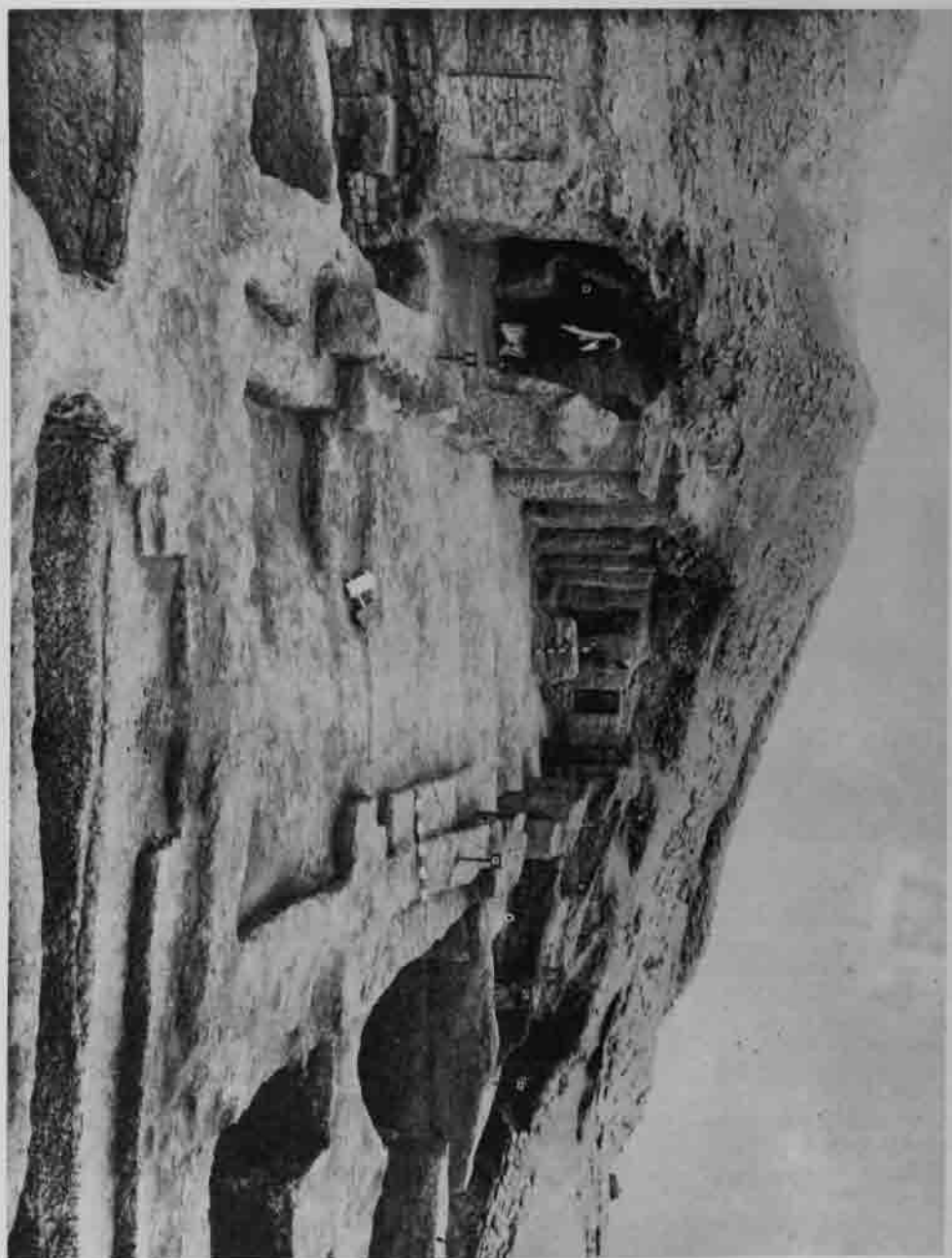


FIG. 56

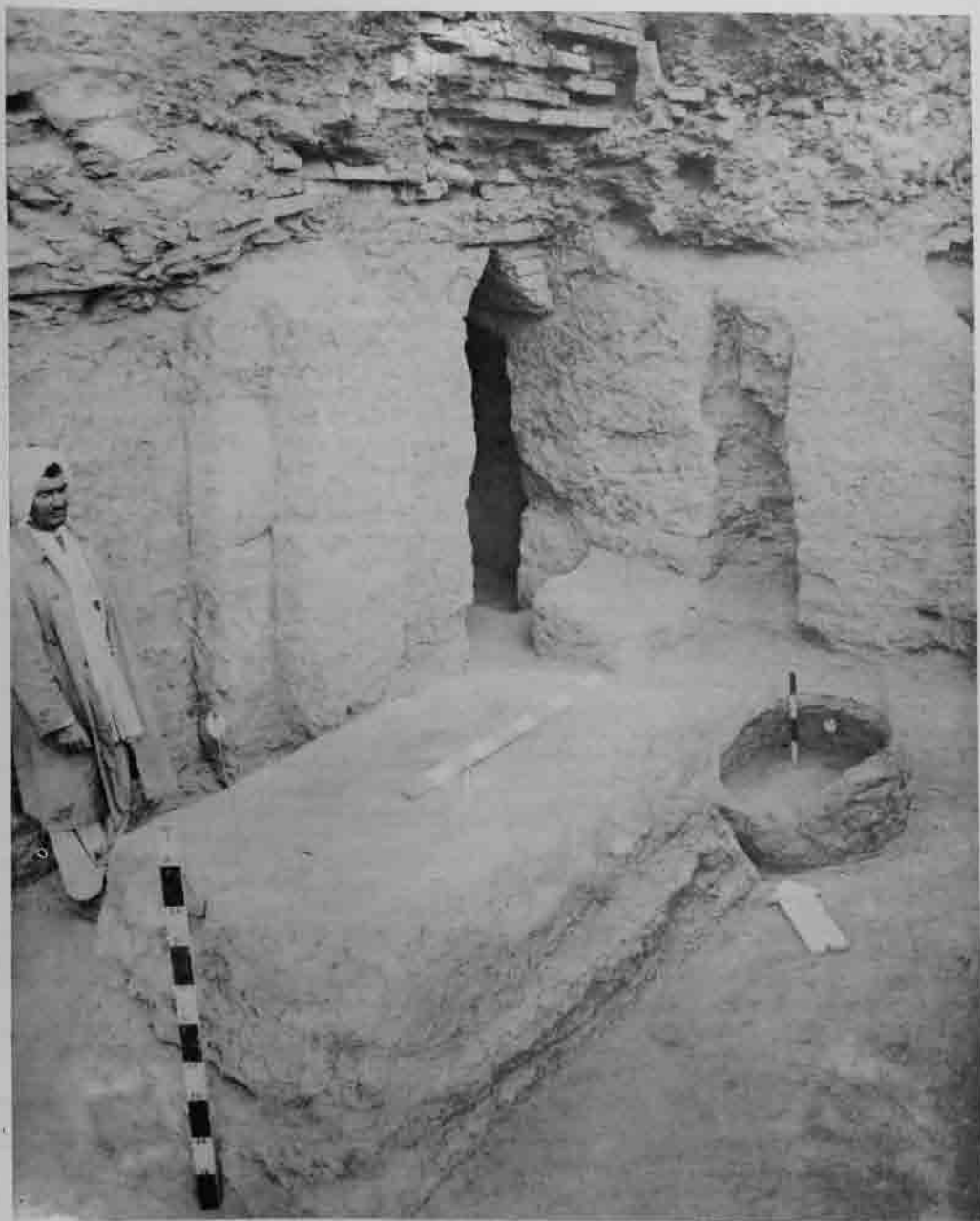


FIG. 57

of bones seldom appeared, it occurred to us that the fish might subsequently have been eaten. The probability that the podium had been used for burnt-offerings was most definitely indicated. Yet, the fish-offerings at least, must have accumulated in almost embarrassing quantities, and the disposal of their remains, merely by ritual burning in this way, must have presented obvious practical difficulties. This problem seemed to have been satisfactorily solved, by the devotion of a chamber (Room 14) adjoining the podium, exclusively to the destruction by fire of surplus offerings. This room was, in fact, completely filled with a mass of ashes and debris, burnt almost to the consistency of clinker, such as one would expect to find after the destruction by fire of animal remains. The ashes had overflowed through the open door into the sanctuary, and the plastered walls were blackened by the smoke.

On the subject of such ritual offerings, Dr. Van Buren has made some interesting observations in a review of our First Interim Report⁽²⁶⁾. She says: "It seems more likely.... that the fires were kindled to consume sacrifices, and that, indeed, the room in Temple VI (Room 14) was really a local version of the "Opferstatten" such as were found at Uruk in the Eanna precinct and at Ur in the archaic terrace area⁽²⁷⁾. The mention of quantities of fish-bones mingled with ashes in Temple VII and VI and at other points induces one to think that at Eridu the sacrifices consumed were "the fish-offerings of which there were such ubiquitous traces". It is true that so far compact masses of fish have not come to light at Eridu as they did at Lagash and at Uruk. But these "Opferstatten" if they were really such, would be the earliest examples so far discovered, and the rite may then have been differently performed so that the fish offered were consumed until only the bones were left. It would also seem to indicate that the earliest "Opferstatten" were actually in the temples instead of being relegated to a separate enclosure".

It will be remembered that the "compact masses of fish", discovered at Lagash, consisted of an immense number of complete skeletons, including some — "de grande taille, tels que seraient, par exemple, des thons ou les fameux "poissons de Tobie", qui peuplent le Tigre et l'Euphrate".⁽²⁸⁾ They were later shown by the contents of texts found in the vicinity, to represent repositories of

dried or smoked fish, stored for subsequent disposal. It may also be observed that the clay basin behind our podium can hardly be compared to those associated with the "Opferstatten" at Uruk, since the latter were shown to have been scrupulously replastered preparatory to each repetition of the sacrificial ritual⁽²⁹⁾.

There remain few details to record of the subsidiary chambers, which survive on either side of the sanctuary in Temple VI. All showed signs of having been painted with white lime-wash over the mud plaster; their floors were fairly liberally scattered with fragments of rather crude votive pottery and a few complete vessels. Only the double chamber (No. 28) had a rather special character. By analogy with Protoliterate and other later temples, one would half expect to find here a ramp or stairway, leading up to the flat roof. But of this there was absolutely no signs. Unbroken floors extended over the two chambers at both occupation-levels, and from them came some of the most interesting pottery found in the whole building. These were sherds, ornamented with very elaborate painted designs, and triangular pierced openings. They proved to belong to three separate examples of a particular type of bell-shaped "censer", comparable to one found in an Al'Ubad setting at Tepe Gawra. A small mud-brick pedestal, adjoining the door which led from these two chambers to the sanctuary, did not satisfactorily explain itself.

The only sections of the outer face of Temple VI, which we were actually able to trace, were the northeastern facade and the return-face of the projecting section at the eastern corner. From these it may be assumed that at least the other projecting sections at the other three corners, if not the long facades also, must have been ornamented with alternating buttresses and recesses. Sufficient remained of the northwestern outer wall, to prove that there could have been no entrance to the building on this side. The alternatives remained that the main approach could have been through Rooms 12 or 13, and Room 13 was eventually proposed, mainly because it corresponded more closely to the position of the entrance-doorway in Temple VII.

The filling of Temple VI

After the collapse of Temple VI, preparations appear

26. E. Douglas Van Buren, Excavations at Eridu, in *Orientalia* Vol. 17, fase. I, 1948, P. 118.

27. Lenzen, UVB, VIII, SS 11-16; 18, 19, IX S11; X S14; XI S17;

AFO, XIV, 1941, SS 72-3

28. Henzey, in Cors. *Nouvelles Fouilles de Tello*, P. 81.

29. Cf. Van Buren, *Orientalia* IX, 1940, PP. 102-103

to have been made for building a new temple over it, at a higher level, but to approximately the same plan. In order to create foundations for the new walls, what remained of the old ones were packed out with *liben* to an increased breadth and all the doorways filled. For some reason, a narrow foundation was also built across the "proscenium opening" at the northeast end of the sanctuary, against the end face of the podium. At one point, in the surviving part of Room 18, it was possible to detect that by this time the temple itself must have been in a state of considerable dilapidation, for here it had also been necessary to fill up a wide breach in the outer wall. It would, in fact, have been reasonable to consider the new masonry merely as representing repairs to the old walls, had it not been for the fact that all the doors were now eliminated and there was no trace of a pavement to mark any subsequent occupation at the old walls. As it was, its lowest courses were laid directly upon the secondary pavement of the old building, and the spaces inside the chambers were filled with debris. It was therefore, obviously rather to be considered as an economical device, to avoid the necessity for packing the whole of the ruins with solid brickwork. A similar expedient had indeed previously been used in constructing foundations for those walls of Temple VI which did not occur directly over earlier structures, but in this case, apparently as an afterthought, the spaces between had also been packed with solid brick.

Since the new foundations appeared to have been decapitated in the process of levelling the emplacement for the ziggurat, it was not possible to determine the exact occupation-level of the building which they supported. Nor could one be certain whether this building was, in fact, Temple V, or should be considered as intermediate between V and VI, a question of some importance in endeavouring to visualise the transition from the Ubaid to the Uruk period. A small argument in favour of the second alternative, was the discovery of a large, but undatable pottery jar, filled with charcoal and other objects of an unmistakably domestic character, sunk into the upper part of Room 19 from a post-Temple-VI occupation-level. This suggested a period during which the temple had fallen into disuse, and which might conceivably have corresponded to the termination of the Al'Ubaid period.

Architectural Evolution of the Temple

The fragmentary remains of walls at Level XVIII are too scanty to have much significance, except in their capacity as possible components of buildings which might

be considered as predecessors of that at Level XVI. For it is at Level XVI that we are first faced with the important problem as to whether the building with which we are dealing is or is not a temple. It appears to us that there are many arguments in favour of an affirmative answer to this question, and few against it.

In the first place, the location of the building on a spot, which came to be considered by subsequent generations as the traditional site of a temple, would, in itself, normally be a strong evidence in favour of attributing to it a non-secular character. Yet, caution in accepting such an inference is indicated, by the broken continuity in Levels XII and XIII, where no building-remains of any sort are to be found within the area of our sounding, and the slight change in the location of the site, when an obviously ritual building re-appears at Level XI. Less equivocal evidence must, therefore be sought through a closer examination of the Level XVI building itself.

In the cult-chambers or sanctuaries of the buildings in Levels VI to XI (whose identification as temples can hardly be questioned), two of the most conspicuous features are, first, an "altar" placed on the central axis of the chamber, sometimes emphasised by a deliberate architectural setting, and secondly, also on the central axis, a free-standing podium, showing signs of having been employed in some ritual which involved burning. Both these features appear in our building at Level XVI, and the position of the "altar" is emphasised by a deep recess. An entrance-doorway in the wall facing the altar recess, is the only other notable feature of the chamber. With a floor-area of hardly more than nine metres, encumbered by the two features first mentioned and by projecting piers for supporting a roofbeam, it could hardly be suggested that the building would be serviceable for domestic use, while an alternative purpose would be difficult to imagine. Finally the provision of a circular oven or incinerator, in almost exactly the same position, relative to the building, as it occupied in Levels XV, XVII and XVIII suggests a ritual conservatism such as one would hardly expect in a corresponding domestic installation. If this argument be considered sufficiently convincing, the best evidence for the similar identification of the building-remains at Levels XV, XVII and XVIII, is their superimposition and the repetition of the "kiln" in all three levels.

Having placed the very primitive, or at least "archaic", buildings of Levels XVIII to XIV in a category of their own, we may turn to the more sophisticated temples of Levels XI to VI. And here again two separate phases

are suggested by the radical change in the plan and general character of the building, which is recognisable in Level VIII. So conspicuous, indeed, is this change in itself that, on the basis of architectural evidence alone, we should be inclined to postulate two new sub-phases of the Al Ubaid period, the first corresponding to Temples VI to VIII, and the second, IX to XI. Since, however, it will be demonstrated elsewhere that the ceramic evidence does not conform to this interpretation, some other form of confirmation must be looked for. One such line of investigation would be by a comparison between our Eridu buildings and the only similar ones yet found elsewhere — namely the succession of Ubaid period temples excavated at Tepe Gawra in North Iraq; unfortunately, however, this does not, as it proves, lead one to any satisfactory conclusion.

At Gawra, the earliest Al Ubaid temples were discovered in 1938, in Levels XVIII and XIX. In the centre is a low podium or hearth, possibly but not necessarily taking the place of an altar (which could not be found). The entrance is on the short side, and the outer wall-faces are ornamented with rudimentary buttresses. For more adequately reported details of an Ubaid temple, one must turn to the "acropolis" buildings, found in 1936⁽³⁰⁾. Here the most complete and intelligible plan was the building known as the "Northern Temple", an edifice whose extremely thin walls were strengthened and ornamented with a complex system of buttresses and recesses. A central hall, presumably the cult-chamber, ran the whole length of the building, and was flanked on either side by two subsidiary chambers, separated by narrow passages. The *iwān*-like recesses thus created in the two longer facades of the building, provide perhaps the most significant points of comparison between the Northern Temple at Gawra and Temples IX, X and XI at Eridu. The orientation of the former approximately matched that of the Eridu Temples, and its entrance was from the side, through the southernmost chamber. At this point the comparison is exhausted, for the Northern Temple had no altar or offering-table, and its chambers, two of which were, for some reason inaccessible, had no particular character.

The Al Ubaid period at Tepe Gawra ended with Level XII, so that, if we require a parallel for our later Ubaid temples at Eridu, we must seek it, rather disconcertingly, in the temple-buildings of Levels VIII to XI, which should

rightly correspond in time to the North Iraq equivalent of the Uruk period⁽³¹⁾. And here immediately one observes a common architectural characteristic, which cannot easily be ignored. For the entrance to all the temples found in these upper levels at Gawra invariably gives directly onto the sanctuary through its short side, and is framed in a deeply recessed "porch". It would be difficult to avoid a comparison between this treatment and that, for instance, of the end-facade of Temple VIII at Eridu, where the dual entrance on the main axis is set back between two projecting wings. Again, however, in the Gawra temples, there is no altar against the end wall, and the podium or hearth seems likely to be a substitute for it.

It would clearly be too bold an inference, on the basis of these observations, to correlate the late Ubaid period in South Iraq (which, indeed, has no exact parallel in the North) with the "Uruk" period at Gawra; and a chronological conclusion must therefore be postponed, pending an examination of the ceramic evidence.

The last three stages in the evolution of the Eridu temple (Temples VIII, VII & VI) follow logically one upon the other, and from Temple VI, it is but a short step to Protoliterate buildings already known, such as the temple on the Archaic Anu Ziggurat at Warka⁽³²⁾ and the Painted Temple at Tell Uqair⁽³³⁾. Thus the architectural development of characteristics of Mesopotamian Temples may now be followed in detail, through a long series of actual buildings, from the prehistoric to the Protoliterate, and, as has been shown in another work⁽³⁴⁾, from the Protoliterate to the Protohistoric and onwards.

At Eridu, excluding the archaic building remains, whose claims to have their place in the sequence have already been discussed, we are in a position to examine the process in detail from Temple XI onwards. In these early levels, we must be prepared to be hampered in our interpretation of the plan, by the comparatively small proportion of the building which was accessible for excavation. Nevertheless, in the fragmentary plan of Temple XI, several points are clear. In the first place, there is no entrance to the building from the southeast side, and no entrance would, in fact, be practicable since the face of the platform runs along the base of the facade. The position of the ramp, on the contrary suggests an

30. B.A.S.O.R. No. 56, April, 1937.

31. Food examples are illustrated in Delougaz & Lloyd, *Op. Cit.* Fig. 212.

32. Discussed in Delougaz and Lloyd, *Op. Cit.* P. 306.

33. Ref. Uqair publication.

34. Delougaz and Lloyd, *Op. Cit.* P. 304 ff.

approach from the southwest side. This applies equally to Temple X, where the southern corner of the building coincides with face of the platform. In temple IX, however there are no less than three doorways leading into the building on the southeast side, one through the chamber with the offering-table, one through the recessed porch and one leading into the long passage behind the altar. It is, accordingly impossible to generalise about the entrance-principle of these three plans, particularly as the existence or otherwise of an approach on the main axis, opposite to the altar, cannot be established.

The existence of the altar itself, built against the short wall of the sanctuary at the southwest end, can, we believe, in all three temples be assumed. Surviving fragments of it were actually found in Temple IX, while in the remaining two cases, the possibility of its having existed was not excluded by circumstances. The problem of the "offering-table" is slightly more equivocal, since the part of the sanctuary where it was located in the later temples, could not, at this stage, be reached. It is possible that its function was actually fulfilled in Temples XI and IX by similar features which occur in the larger of the two side-chambers, and in Temple X, by a pedestal located outside the building. The buttressed facades and excrescent chambers can be paralleled in the "acropolis" buildings at Gawra, but the long passage behind the altar is unique and inexplicable.

Here, in any case are the first elements of what afterwards became the characteristic plan of a Mesopotamian temple. To the simple cult-chamber of the archaic levels, it has become necessary to add subsidiary chambers with recognised ritual functions, and these have appeared as separate excrescences on the facade. The recesses between these projections have created a feature, which at Gawra, is given architectural emphasis. Buttresses, projecting from the outside walls are still in the transitional state between giving extra strength, and constituting a formal decoration. The platform or raised emplacement, (whose function was no doubt originally suggested by the possibility of packing out the ruins of an earlier building, as was done for instance in Level XIV), has now become a conventional requirement.

When Temple VIII is reached, the change in plan is so considerable as to make the building almost unrecognisable. The only constant features which remain, are the raised platform and the long, rectangular cult-chamber with its altar and offering-table. There are now two principal means of approach; through central vestibules on either side, or by twin doorways in the end

wall, opposite to the altar. Since the dual entrance on the long axis was eventually, in Temple VI, dispensed with, and only one lateral doorway retained, one may perhaps assume the latter to have been the most important. At the same time the deep recesses in the end facades, which frame the twin doorways, could be taken to be a survival of the "iwans" created in the earlier facades by the projecting chambers. In Temple VII, the twin doorways themselves are again present at the northeastern end of the sanctuary, but at the altar end they have disappeared, leaving only vestigial remains in the grouping of the buttresses on the outer face of the wall. The recesses in the end facades of the buildings are now much reduced in depth, and similar recesses have now, for the first time, appeared in the long facades also.

In Temple VIII, the asymmetrical projection of two chambers from the southeastern facade, provides an indirect, secondary entrance to the sanctuary at the altar end, and could be taken to reflect a similar feature in Temple IX. The whole arrangement is almost exactly repeated in Temple VII, only the restricted size of the platform, makes it necessary for the outer of the two excrescent chambers to be entered at ground level. Another new feature is the double compartment at the northern corner of the building (restored, in the case of Temple VIII, by analogy with Temple VII). An arrangement of this sort, was found in plans of later periods, almost invariably suggests a ramp or staircase leading up to a flat roof. But neither in the case of Temple VII, nor of Temple VI, where the feature is repeated, could any trace of such a structure be found. Particularly in Temple VI, its absence could be proved, since the whole of both compartments were covered by a clay floor, liberally sprinkled with potsherds. In Temple VII, the axial staircase leading up to the main entrance in the side of the building, is again a feature which may be assumed to have existed in all three of these later 'Ubaid temples. It may be said to be the early prototype of the great ziggurat staircases of historic times.

It may be said of Temple VI, that it has as much in common with the Protoliterate temples of, for instance Warka and Tell 'Uqair, as it has with its predecessor, Temple VII. Two notable features of the plan, however, which distinguish it from those of the later buildings, are evidently survivals in the Al'Ubaid tradition. One is the excrescence of the corner chambers, giving a recessed centre to each of the four facades: another is the "proscenium" openings at either end of the sanctuary, creating semi-detached vestibules, in one of which the

altar is set. Also with the extension of the building southwestwards, the sanctuary has become almost passage-like in length, giving to the whole plan a proportion which is not reflected in the later temples. The main entrance is through a vestibule at the side, and two deep niches in the end wall are all that remain to mark the position of the old, dual entrance on the long axis. This again makes an interesting comparison with the two Protoliterate buildings previously referred to. For, though apparently contemporary, they are not consistent. In both, there are entrances through vestibules on both sides of the building; but, whereas in the Painted Temple at 'Uqair, the end doors are still replaced by twin niches at either

end of the sanctuary⁽³⁵⁾, in the White Temple at Warka, dual entrances have again appeared in the end wall of the chamber opposite to the altar, while the altar itself is pushed on one side to make room for a third⁽³⁶⁾. In both Protoliterate buildings, there is a double chamber of the ramp-or-staircase type. That in the Painted Temple contains a well-preserved staircase leading to the roof. Observing the relative positions of the altar and offering-table in this latter building, there can be little doubt that it is directed by a ritual or architectural tradition, whose continuity is unbroken throughout the entire sequence of temples discussed in this chapter.

35. J.N.E.S. Vol. II, No. 2, April 1943, Plate V.

36. A convenient plan is reproduced in Delougaz & Lloyd. *Op. Cit.* Fig. 209

CHAPTER 4
UBAID CEMETERY



FIG. 58

A. Situation and Stratigraphical Indications

The Al'Ubad cemetery is situated outside the main acropolis mound, in the vicinity of the breach in the southwest retaining-wall, which occurs in Square G/7 on the site-plan (Fig. 3). It occupies almost the whole of Square G/8 and the northeastern half of G/9. As has been explained elsewhere, there was insufficient archaeological evidence positively to confirm the existence at this point of a main approach to the acropolis, yet the ground sloping gently away from the base of the retaining-wall in the neighbourhood of the breach, was found to have been purposely consolidated with a layer of mud-brick, and this brick-paved "causeway" passed over the tops of the first graves to be discovered, on the northeastern edge of the cemetery. Beneath it, the burials were sunk through a deposit of

'Ubad period occupational debris, sometimes into the clean sand beneath.

The position of the cemetery in relation to the Al'Ubad village itself is interesting; for, although the nearest graves are situated within eighty metres of the contemporary temple (Temple VI), nevertheless, all the evidence suggests that the ground which they occupy represents only the outer fringes of the settlement. Throughout the cemetery excavation, no trace was found of any actual building, and no brickwork was encountered, except that connected with the graves themselves. The residential area evidently began beyond the southeastern limit of the burial-ground, where we later excavated parts of characteristic 'Ubad dwelling-houses with *liben* walls, and perhaps to the northeast, between



FIG. 59

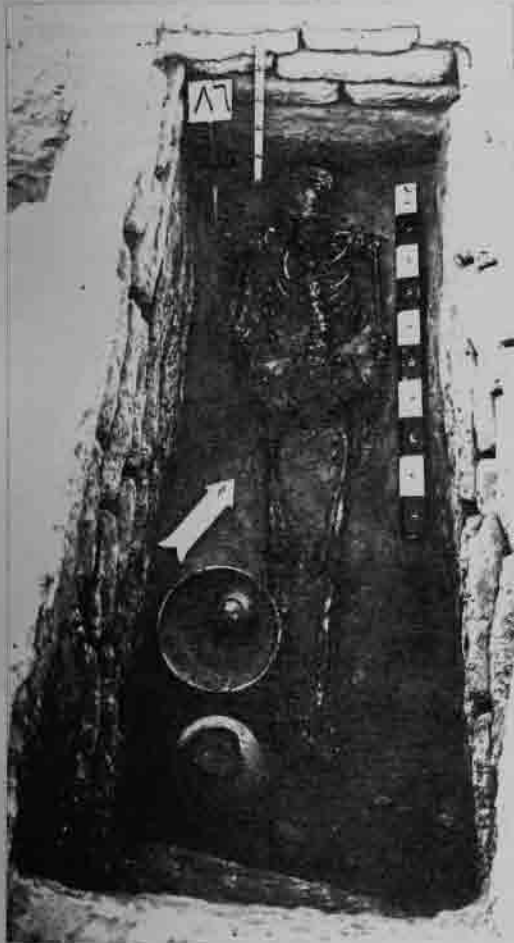
FIG. 60



the cemetery and the temple.

In the centre of the cemetery, the layer of occupational debris, through which the graves were dug, had an average depth of 106 cms. The pottery, which was found amongst it, included a fair proportion of Qal'at Hajji Mohammed types and pre-'Ubaid survivals; so that one could safely take it to represent the trodden rubbish which would accumulate in such a locality, outside the village, over a fairly long period, before it came to be used as a cemetery. The upward slope of its stratification indicated that the village itself already occupied a considerable

FIG. 61

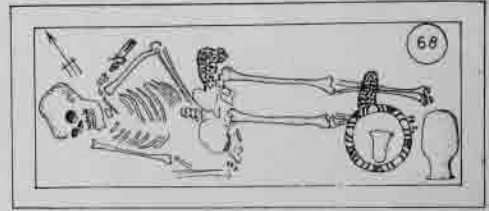
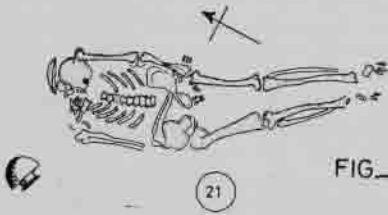
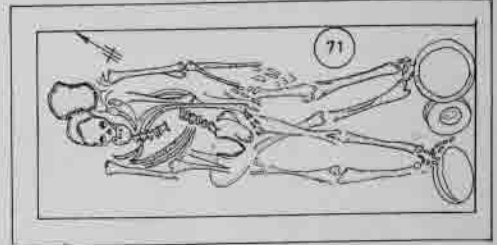
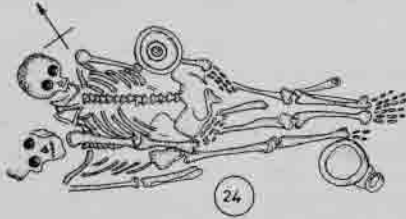
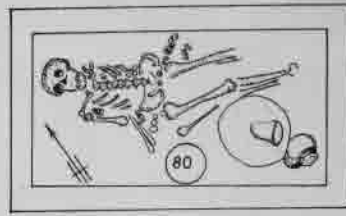
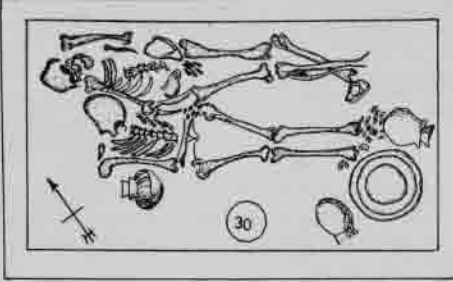


elevation. Apart from these considerations, the attribution of a date to the graves depended largely on the typology of the funeral pottery, which proved sufficiently definitive.

B. Tomb-Construction and Method of Burial

By far the greater proportion of burials were contained in rectangular "boxes" of sun-dried bricks (Figs. 58-60). The *liben* sizes averaged $49 \times 22 \times 8$ cm. and the tomb-wall was invariably half-a-brick thick. The normal procedure appeared to have been, first, to excavate a shaft, which usually but not always, penetrated through the occupational debris into the clean sand beneath. The "box" was then built in the shaft with no foundation or pavement of any sort, to a height of about ten courses of bricks (Fig. 61). The body was laid at full length, directly on the sand at the bottom, and the tomb filled with earth up to the level of the tops of the walls. Next it was sealed in with one or more courses of bricks, extending somewhat beyond the outer faces of the walls.

There was a fairly high proportion of "family" burials containing two or more skeletons. The fact that there were never more than two adults in a grave, (the third skeleton, which was occasionally added, being invariably that of a child), may perhaps be taken as evidence that the 'Ubaid people adhered to the principle of monogamy (Figs. 62 & 63). The normal practice in the case of family burials seemed to be as follows. The primary interment was made in the centre of the tomb, although there was some evidence to suggest that, if a secondary interment was anticipated, the breadth of the "box" was slightly increased (Fig. 64). The body lay fully extended upon its back, the head facing up-wards or slightly turned to one side, the hands at the sides or folded across the pelvis. Any funeral pottery with which the grave was furnished, usually lay in the corner of the "box" nearest to the right foot, and generally are a jar placed always upright, a dish, and a cup usually placed lying or inverted inside the dish. In a few cases the cup is inserted in the mouth of the jar, and sometimes a second jar is provided. For purposes of a secondary interment, the sealing of the tomb was apparently broken and the packed earth removed from its interior, until the bones of the earlier burial were exposed. In some cases these were then pushed quite carelessly aside, in order to make room for the second body (see tomb in the foreground of Fig. 58). In others the second body was laid directly upon the first. Funeral pottery connected with the secondary interment



FIG_62

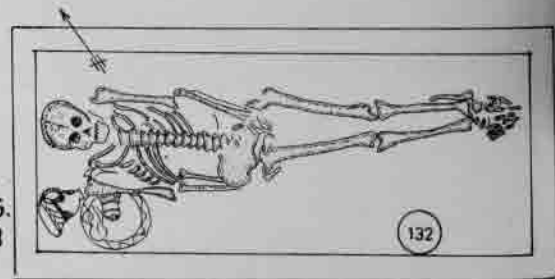
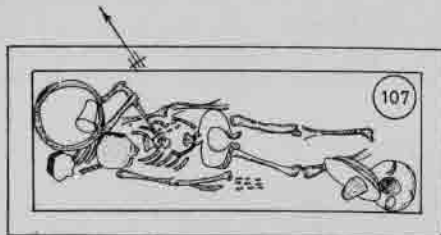
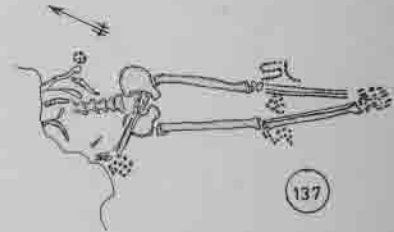
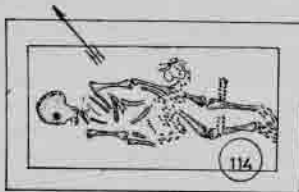
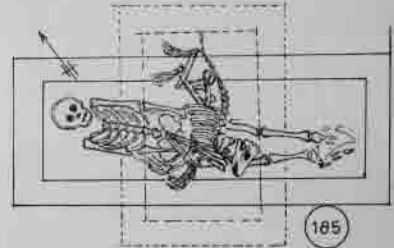
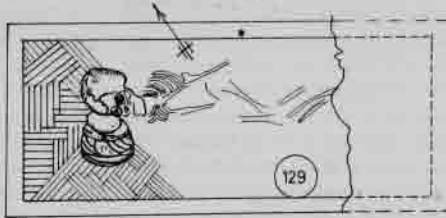


FIG. 63

was deposited on the chest or near the head. (Fig. 64 shows the only instance where the head of the second body rested directly upon a large funerary dish buried with it). When the body of an infant was added to those of its parent or parents, it was usually placed near their heads, sometimes in a half sitting position against the end wall of the tomb (see burial 107 in Fig. 63). In the ordinary way, however, children were buried in appropriately small "boxes" of their own, and furnished with a standard set of miniature vessels.

The principle of "family burials" introduces a slight problem as to what extent the sealing of the grave

FIG. 64



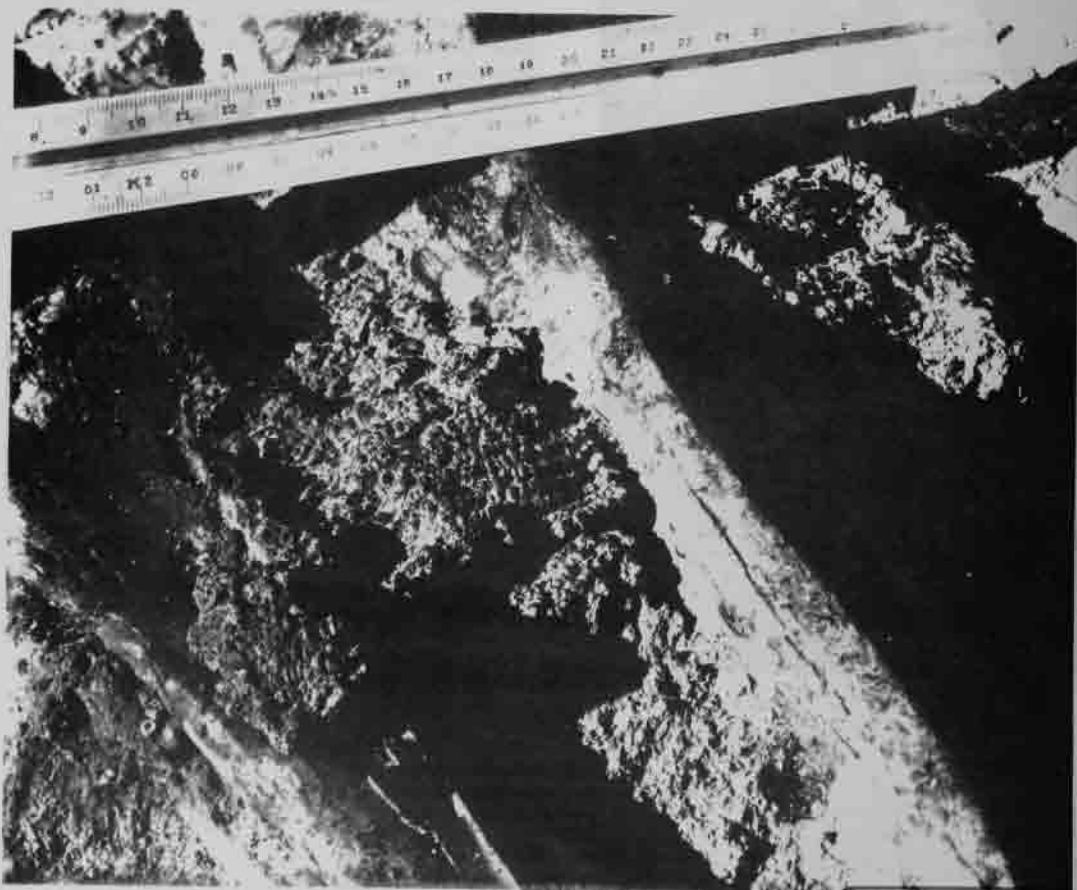
remained exposed on the surface when the process of burial was complete. If the top of the grave was completely covered with earth, one can only assume that some visible mark or emblem was left, so that it could subsequently be located and identified. Figure 64 (quoted above) gives an excellent general impression of the interment process. The grave in the foreground is a family burial, with two sets of funerary pottery placed as described above, the primary interment being displaced to make room for the secondary. The **liben** sealing which has been broken through when the tomb was excavated, can be seen in the background, extending over an area somewhat greater than that of the actual tomb. To the right of this tomb, three individuals (Fig. 58) perhaps of more humble social status, have been buried at various times without a **liben** "box" their bodies being laid directly in the clean sand. They lie in the normal, extended position, the hands folded over the pelvis. Beyond these again is a **liben** box, which has not yet been opened. The sealing remains intact, and a workman is in the process of articulating the individual bricks of the actual tomb. Several other boxes are already exposed in the background. One burial (No. 97) suggested unusual circumstances. There was one complete skeleton, correctly disposed and oriented; but beside it (Fig. 65) were the crushed remains of a dozen separate skulls, and a few fragmentary remains of other bodies. With its implication of violence, this grouping would suggest the result of some tribal raid.

There was occasionally evidence of food-offerings being made at a late stage in the burial ritual. Meat-bones were sometimes found in the earth filling of a tomb, or laid 'on top of the brickwork' with which it was sealed. One interesting burial was that of a youth, about fifteen or sixteen years old, whose body was accompanied by that of a dog in burial No. 185 Fig. 66. The human skeleton, which was provided with the normal complement of funeral pottery occupied the centre of a **liben** box, and that of the dog was laid across its middle, a few centimetres above (see No. 185 in Fig. 63). The canine remains were unusually well-preserved. Beside the lower jaw lay a meat-bone which had no doubt been placed there intentionally at the time of burial. The inclusion in this way, of a favorite domestic animal's body in a human grave, was perhaps not an unusual procedure, since another grave contained the somewhat less well-preserved skeletons of two dogs.



FIG. 65

FIG. 67



C. Dress and Ornament

Bead necklaces and other ornaments were found in a fairly large number of burials. The beads were evidently most often worn around the neck or wrists; but there were instances where they had ornamented a belt around the waist, and in Burial No. 68 (Fig. 67) are two bands, one of white threaded beads around the waist, and the other of closely threaded black beads about six cms. wide, lying across the shin-bones just below the knee, suggesting the ornamental fringe of a dress (burial 68 in

FIG. 66



Fig. 62). For two bands of beads see burial No. 114 in Fig. 63. Examples of the beads themselves may be seen in Fig. 68. The vast majority of them appear to be made of obsidian, a material whose hardness must have made the process of grinding them extremely arduous. They vary in colour from near-black to a very light translucency. The smallest white beads in the picture are of shell and there are a few (e.g. No. 10) made of fresh-water shells. Outside the category of beads, there is an interesting pair of small, cylindrical pegs of obsidian, pierced at one end, (No. 12 in Fig. 68) which, in consideration of the position in which they were found, on either side of a skull, can confidently be identified as earrings. Two tiny rings of pink stone (No. 15) were similarly identified. The small group of three pierced beads (No. 13) were located near the mouth of a skull, and could perhaps have been a nose-ornament. Group No. 14 was evidently a finger-ring. No copper pins, or for that matter any sort of metal object, was found in the graves.

D. The Grave Schedule

The excavation at the cemetery began in the second season on the 13th of December 1947 and continued till the 2nd of March 1948.

The number of the uncovered burials totalled 193. Investigation by test trenches in various directions from the excavated area revealed that the cemetery was fairly large and could be four to five times as large as the excavated area, extending to the northwest and southwest, and would include between eight hundred to a thousand burials.

Each burial was drawn in detail in a special grave book, from which this schedule was compiled immediately after the last season of work.

For the purpose of this publication, and in order to avoid repetition, only twelve representative burials are drawn in the two Figures Nos. 62 & 63, which are deemed sufficient together with the published photographs for illustrations.

The number given in this schedule under the heading "level", gives the depth in metres of the upper surface of the liben box or the burial without box, from the surface of the cemetery. The number between two brackets, gives in metres the level of the burial in relation to the top of the ziggurat which is 25.30 m. above the plain.

The sex is approximately identified on the basis of such bones as the pelvis, the eye socket and the brow, and occasionally on the basis of jewellery.

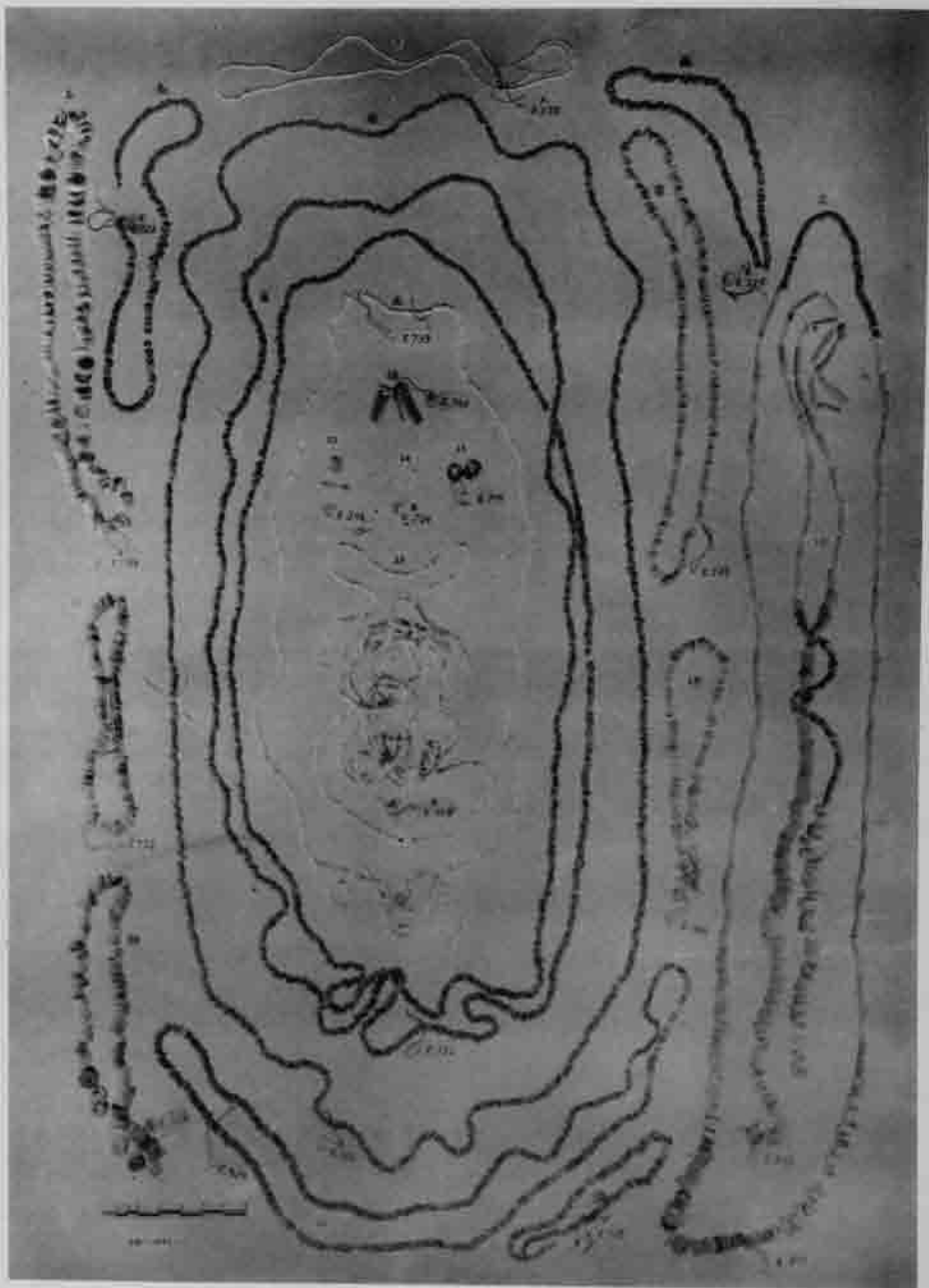


FIG. 68

Infants of less than two years old are very rare in the cemetery. Judging by the infant cemetery of Tell AS-SAWWAN³⁷ there could be a similar cemetery some place at the ancient site of Eridu. But there may be also a possibility that infants were buried in the walls or below the floor of the dwelling houses similar to the custom practiced at Tepe Gawra in the Ubaid levels³⁸. In spite of the fact that no burials were encountered in the

discovered Ubaid buildings in the Hut Sounding.

Under the heading of pottery types in the grave schedule are two types of numbers, the upper (which is in hundreds) is the number of the pottery vessel in the field register of the discovered objects. The smaller number underneath is the number of the type in the chart types in Figure 72.

37. Faisal el-Waily and Behnam Abu es-Sooif, "Excavations at Tell es-Sawwan, First preliminary report (1964)", *Sumer* 21 (1965), pp. 23-

38. A. J. Tobler, *Excavations at Tepe Gawra* vol. 2 (1950), pp. III ff.

No. of grave	Level	Ori-entation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preser-vation	Photo Diagram	
1	0.70 (20.50)	N.W.	Sealed libn box	Adult male	Extended; hands at side face westward.	52 on the face 13A	—	bad	—	
				Adult female	extended; hands at side face eastward.	—	—	—	bad	—
2	Surface	N.W.	On libn floor	Adult?	extended; hands near pelvis; face westward.	c.155	—	—	—	
3	0.30 (19.80)	N.W.	Libn box	Adult female	extended on right side; face westward.	374 529 BC, 12B	—	bad	—	
				Adult male	extended on back; hand near pelvis; face westward.	c.175 383 5A, 12B	—	bad	—	
Note: When the male was buried, the skeleton of the female was pushed aside.										
4&5&6	Surface	N.W.	Sealed libn box	Child	extended; face upward.	c.75	—	—	bad	—
7	0.55 (20.70)									
8	0.80 (20.30)	N.W.	Libn box	Adult?	legs slightly bent; hands meeting at pelvis.	c.150	—	meat-bone on breast	bad	—
9	1.50 (20.80)	N.W.	Buried on pure sand, lump of clay beneath the head	Adult?	Body on back, legs slightly bent; hands meeting at pelvis; face upward	c.165	—	—	bad	—
10	0.30 (19.40)	N.W.	In Ubaid deposit.	Adult?	extended; hands at side; face slightly westward	381 337 6A, 5C, 379 13A	Meat bone	bad	—	
11	Not recorded									

No. of grave	Level	Orientation	Type	Sex	Age	Position	Pottery Size	Pottery types	Other Objects	Preservation	Photo Diagram
12	0.60 (20.00)	N.W.	Libn box	Adult?		extended; right hand placed near pelvis; left hand at side.	c.140	—	—	bad	—
13	0.60 (20.00)	N.W.	Libn box	Adult?		extended; face upward; hands near pelvis.	—	393 5B, 13E	—	bad	—
				Adult?		Skull collapsed; displaced	—	10B	—	bad	—
14	1.00 (20.10)	N.W.	in sand	Child		Body extended on right side	—	—	—	bad	—
15	0.60 (20.30)	N.W.	Libn box	Youth		extended; hands by the sides; face slightly westward.	C.90	385 382 566 1B, 7A, 1B, 383 675 387 5C, 5A, 13E	—	bad	—
16	0.80 (20.30)	N.W.	Sealed libn box	Child		extended; hands near pelvis.	c.77	579 583 13C, 1C, 5A,	—	bad	—
17	0.40 (19.90)	N.W.	Libn box	Adult?		extended; hands near pelvis; face slightly eastward	c.170	5A 659 632 5C, 12A, 1B	—	good	—
<p>Note: Body and skull removed to the Iraq Museum. On each side of this grave there was a child buried outside the box, body of a third child was above the box.</p>											
18	0.60 (19.70)	N.W.	Libn box	Adult male		Body slightly turned on right side, right hand extended; left hand on pelvis.	—	545 546 8A, 8A	—	bad	—
				Adult female		Body slightly turned on left side, right hand near pelvis.					
19&20								39C 5C			
21	0.10 (19.75)	N.W.	Buried above sealed libn box of grave 22	Adult male		Extended; skull collapsed; left extended; right hand flexed on pelvis.			Stone jar fig. 113.11 Dish fig. 113.13 Mace head fig. 113.12	good	Diagram Fig. 62
<p>Note: Buried without box, the stone jar found at about 35 cm from the right shoulder, the dish and mace head near the skull, probably of Uruk period</p>											

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
22	0.45 (20.00)	N.W.	Libn box	Adult female	extended; face slightly westward; arms and legs in disorder.	c 167 504 512 3B, 5A 553 1B	—	bad	—
23	0.70 (19.90)	N.W.	Sealed libn box	Adult male	extended, slightly on the right side; face westward.	c.168 401 663 8A, 5A 396 398 13A, 6A	—	good	—
				Adult female	extended; face westward.	398 400 6A, 12C	—	bad	—
Note: The male died first, and when the female was buried, his remains were pushed aside. One of the dishes was found beneath the female; other vessels were near the feet of both.									
24	1.00 (21.10)	N.W.	—	Adult male	extended on back	— 5C, 13A	—	good	Diagram Fig. 62
				Adult female	extended on back; face eastward; hand near pelvis.	c.155 12B	—	—	
Note: The body of the female partially covered that of the male.									
25	1.20 (21.10)	N.W.	on pure sand	Adult female	extended on back; hands near pelvis	— 463 7A, 12B near the right foot	—	very bad	—
26	Surface	N.W.	—	—	extended; face eastward.	— —	—	very bad	—
Note: Much disintegrated.									
27	Surface (20.30)	N.W.	Much disintegrated	—	—	505 2A, 1A, 7A	—	—	—
28	0.40 (20.60)	N.W.	Libn box	child of c 14 years	extended; face slightly eastward.	c. 115 484 5C, 1B, 2A	—	very bad	—
29	0.40 (20.50)	N.W.	On sand	Child	body on back; legs slightly flexed.	c.86 403 5A, 12B	—	bad	—
30	0.15 (20.30)	N.W.	Sealed libn box	Adult female	extended; right hand on body; head collapsed	455 5A, 13D, 13A, 1C	Fish and meal bones	bad	Diagram Fig. 62
				Adult male	extended; legs crossed.	c 160 471 590 12C, 1B	—	—	

Note: The two cups (types 1C & 1B) found inserted in the mouth of the two jars (types 12A & 13D). One jar (type 12A) with the cup in its mouth, laid near the right shoulder of the female. Other pottery near the feet of the same body.

No. of grave	Level	Orien- tation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preser- vation	Photo Diagram
31	u.ou (20.75)	N.W.	Sealed libn box	Adult? Adult?	body on the left side. extended on the back.	— 653 5A, 5C — three of 447 13E	—	bad	—
Note: The body on the right was buried first. Two dishes and one jar on one side of the feet and two more jars on the other.									
32	1.10 (21.10)	N.W.	over an older grave.	Adult?	extended on back, face upward.	c. 110—	—	bad	—
33	1.20 (20.20)					—			
34	1.50 (20.50)	N.W.	Sealed libn box	Adult female	Extended on back; hands near pelvis; face upward.	c. 155 499 5A, 1B, 13E	Two meat bones near the head.	fair	—
35	0.40 (19.60)	N.W.	Libn box	Child	Extended on back.	c. 59—	—	fair	—
36	1.40 (21.10)	N.W.	Over an older burial	?	Extended on back; hands near pelvis; face upward.	c. 148 5C, 2A	—	bad	—
37	0.20 (19.70)	N.W.	Libn box	?	Extended.	— 442 5A, 2B	—	bad, parts of body missing through excava- tion.	—
38	0.60 (20.00)	N.W.	Libn box	Child	Extended, slightly on the left side.	— —	—	bad	—
39	1.10 (20.50)	N.W.	Sealed libn box	Child of 14 years	Extended on back; face upward.	— 496, 569 5A, 6A, 13C 1A, near the right arm.	bead of rock crystal on the lower jaw.	fair	—
40	0.50 (20.10)	N.W.	—	Child	Extended, on the back.	— 418 5C, 11A, 419 13E, 9A.	three beads of green stone near lower jaw. A string of beads of obsidian, calcite and shell around the waist.	bad	—
41	1.50 (21.20)	N.W.	Libn box	Adult male	Extended on back, face eastward.	c. 175 483 568 5C, 1C 640 13C.	meat bones on box	fair	—

Note: Both body and pottery were covered with earth, and then large pieces of meat deposited over it. The dish was beside the pelvis, the jar nearby.

No. of grave	Level	Ori-entation	Type	Sex Age	Position	Pottery Size types	Other Objects	Pres-ervation	Photo Diagram
42	1.00 (20.70)	N.W.	Libn box	Adult?	Extended on back; face slightly eastward; right hand extended; left hand on pelvis	c. 170 488 646 630 5C 1B 13E laid near the right leg 635 13B	—	bad	—
43	1.20 (20.70)	N.W.	Libn box	Adult?	Extended on back; left hand on pelvis; face slightly eastward	c. 161 5C, 1B 634 13C	—	good	—
44	0.70 (20.40)	N.W.	Libn box	Child	Extended on back; legs flexed.	— 13E near the head.	—	very bad	—
45	0.60 (20.20)	N.W.	Libn box	Infant	Extended on back; head facing west.	—	—	very bad	—
				Infant	Position confused			very bad	
Note: The chest of the second infant is extending eastward, probably later interment.									
46	Not recorded								
47	0.75 (20.90)	N.W.	Libn box	Youth	Extended on back; right hand on pelvis left hand extended; face upward	c. 135 500 643 6A 12C 11A 13A	—	bad	—
48	0.35 (20.50)	N.W.	Libn box	Child	Body on back; face westward.	— 654 548 5C 8B (1B)	—	bad	—
49	Surface								
50	1.70 (20.50)	N.W.	On pure sand beneath another of about	Youth	Extended on back	c. 115 523 4A	—	bad	—
51	1.00 (20.40)	N.W.	Libn box	12 years Elderly female	Extended on back; hands on pelvis; face slightly westward	c. 170 5C, 1A 613 631 13E 12A	—	good	—
52	1.70 (21.15)	N.W.	Libn box	Adult female	Extended on back; face upward; hands on pelvis.	c. 140 5C, 11A, 615 13A, 13D.	—	good	—
53	0.80 (20.20)	N.W.	Libn box	Child	Extended, slightly on the left side; right hand on pelvis; face upward.	— 527 7A, 13A	—	good	—
54	1.20 (20.60)	N.W.	Libn box	Child	Extended on back	— 485 6A, 469 1C, 9A 554 11A	—	fair	—
55	Not recorded								
56	1.90 (21.00)	N.W.	Libn box	Child	Body on back knees slightly flexed; face upward.	— 12C near the right shoulder.	—	bad	—
57	Not recorded								

No. of grave	Level	Orientation	Type	Sex	Age	Position	Pottery Size	Pottery types	Other Objects	Preservation	Photo Diagram
58	1.00 (21.00)	N.W.	Libn box	Elderly female		Extended on back.	—	497 565 594 5A 1C 1B 547 596 8B 12A	—	bad	—
	Note: Legs missing.										
59	1.70 (21.00)	N.W.	Libn box	Adult male		Extended, hands on pelvis, face westward	c. 145	6A, 13E	—	bad	—
				Adult female		— ditto —	c. 125	13C, 13A			
	Note: The female was buried first; the pottery types found to the east of the female feet.										
60	Surface	N.W.	—	Adult?		Extended, face upward.	—	675 5A and 1C to the west of the feet 407 8C east of the body.	—	bad	—
61	0.65 (20.20)	N.W.	On pure sand	Adult?		Extended on back, face slightly eastward.	—	509 5A, 4 A, 13A with handle on shoulder.	—	fair	—
62	0.50 (19.50)	N.E.	Libn box	Adult female		Body on back; hands on pelvis; knees bent; skull collapsed.	—	5C, 13A, 1B	Two beads of red stone, on both sides of the jaw	fair	—
63		N.W.	Libn box	Adult male		Extended on back; face upward; hands on pelvis.	c. 170	457 7B, 8B	Each wrapped with a mat	fair	—
				Adult female		Extended on back; left hand on pelvis.	c. 153			bad	
64	1.00 (20.70)	N.W.	Libn box			Extended on back, face slightly eastward.	—	7C, 13E 404 5B	—	bad	—
65	0.50 (19.35)	N.W.	Libn box	Child		Extended on back,	—	665 5A, 1C 587 13E	—	bad	—
66	1.00 (20.30)	N.W.	Sealed libn box	Adult female		Extended on back; right hand on pelvis; left hand extended.	—	481 5A, 13A, 1C	—	good	—

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
67	0.50 (19.80)	N.W.	Libn box	Child	Extended on back; face upward, the left arm bent; the right straight.	c. 67 499 13d, 7c with ring base 609 1B	—	bad	—
68	0.70 (20.00)	N.W.	Sealed libn box	Adult female	Extended on back, face slightly westward, hands on pelvis.	c. 142 531 5A, 1B, 13E	Band 6.5cm wide of white & black beads around the body near pelvis.	bad	Photo Fig 67 Diagram Fig. 62
Note: Figurine No. 602 was found near the left shoulder									
69	0.50 (20.00)	N.W.	Over clay floor	Child	Extended on back.	c. 80 492 5A, 1B, 13E	—	bad	—
70	1.10 (20.50)	N.W.	On pure sand	Adult female	Extended on back; right hand extended; left hand on pelvis; face slightly westward.	c. 160 494 638 5A, 13D	—	bad	—
71	1.25 (21.00)	N.W.	Libn box	Adult female	Extended on back; hands on pelvis; face upward.	c. 158 5C 12B	—	bad	Diagram Fig. 62
				Adult male	Extended on back; face upward.	c. 165 6A with partition 1B	—	—	
Note: The male was buried first.									
72	1.70 (20.70)	N.W.	Libn box	Adult male Adult female	Extended on back; face slightly eastward. Extended on back; face slightly eastward.	— 6B, two 1B 13E	—	bad	—
Note: Male buried first. Both much disturbed									
73	0.60 (19.90)	N.W.	Found beneath another burial.	Adult male	Body laid on back; head slightly westward; legs flexed so that feet face backward; right arm straight; left hand on pelvis.	— —	—	fair	—
74 & 75	Surface.					517 633 5A, 12A			
76	1.00 (20.20)	N.W.	On clay floor	Adult?	Extended on back; face eastward; left arm straight; right arm flexed on abdomen	— 425 427 5A, 1C, 13A	—	bad	—

No. of grave	Level	Ori-entation	Type	Sex Age	Position	Size	Pottery types	Other Objects	Pres-ervation	Photo Diagram
77	0.85 (21.00)	N.W.	On libn floor	Child	Body on back, legs slightly flexed, left arm straight, right arm flexed on body.	—	—	—	bad	—
78	0.50 (19.50)	N.W.	On libn floor	Adult?	Extended on back; face upward; hands near pelvis.	—	two 4A 456 6B, 12B	—	bad	—
				Adult?	Disturbed.	—	12B, 11A	—	bad	—
				Adult?	Extended on back; face upward; hands near pelvis.	—	—	—	good	—
Note: Two are superimposed, most probably two burials.										
79	1.80 (21.50)	N.W.	On pure sand	?	Extended on back.	—	510 611 6A, 1C	—	very bad	—
80	0.50 (20.20)	N.W.	Libn box	Girl	Extended on back	—	13A 495 5A, 1B	Necklace of calcite around the neck & necklace of three colours yellow, white & black beads around the body near hips	bad	Diagram Fig. 62
81	1.00 (20.70)	N.W.	Libn box	Adult?	Extended on back; face upward, arms extended by the sides.	—	65 490 6A, 12A, 1B	—	fair	—
82	1.00 (20.70)	N.W.	Libn box	Adult female	Extended on back, legs crossed, hands on pelvis, face upward.	c. 160	6B, 12B 521 639 1B, 13D	—	good	—
83	0.60 (20.30)	N.W.	On libn floor	Adult?	Extended on back, hands one over another near pelvis	—	479 5A two 13A 12B	—	bad	—
				Adult male	Body on back, face eastward, hands near pelvis, legs flexed.	—	491 6A, 13A	—	—	—
84 & 85										
86		N.W.	Libn box	Adult?	Extended on back; hands on pelvis	c. 160	421 422 13C, 6A, 1B	—	good	photo
87	0.30 (19.30)	N.W.	Libn box	Adult	Extended on back; hands on chest.	—	519 4A	—	fair	—
				Adult female	Extended on back; hands near pelvis.	—	464 506 5A, 13E	—	fair	—
						—	—	—	—	—

Note: The second was partially buried over the other.

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
88	0.60 (19.50)	N.W.	On libn floor	Adult female	Extended on back, right arm straight, left hand on pelvis face westward.	— 508 2A 487 642 1B 13C 1b	—	fair	—
				Adult male	Extended on back, face upward, right leg slightly flexed			good	
89	0.40 (19.50)	N.W.	Libn box	Child	Extended, face upward	— —	—	bad	—
90	0.50 (19.30)	N.W.	Libn box	Adult male	Extended on back, face upward.	c. 120 674 5A, 4A, 645 8C, 12B, 13A, 694 6B with ring base.	two necklace one of frit other of obsidian, around the body near hips	fair	photo
				Adult female	Extended in back, face upward, hands near pelvis.				

Remarks. The man was buried first and was disturbed when the woman was buried.

91	0.50 (19.50)	S.E.	Libn box	Adult?	Extended on back, face upward, hands near pelvis.	— —	meat bones on chest Piece of reed mat near left leg and on it pieces of ochre-paint.	good	
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Note. No pottery found; probably post Ubaid period; the orientation is unusual.

92	0.80 (19.80)	N.W.	On libn floor	Child Child	Disturbed, skull turned. Embryonic position, face eastward.	— 442 4B, 6A 467 8C.	—	bad	—
93	0.60 (19.60)	N.W.	Libn box	Child	Extended on back, face upward, hands below pelvis.	— 661 5A, 11A 584, 600 13E, 13E	Animal jaw east of the head	fair	—
94	1.50 (20.50)	N.W.	In sand	Adult?	Body on back, legs flexed, face upward covered with a large fragment of Ubaid bowl.	— —	—	very bad	
95	1.50 (20.50)	N.W.	Libn box	Adult?	Extended on back, hands below pelvis.	c. 168 —	—	bad	

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
96	0.40 (19.20)	N.W.	Libn box	Adult male	Extended on back; face upward, hands below pelvis.	— 439 6A with ring base	—	fair	
				Adult female	Extended on back, face upward, left hand near pelvis.	— 453 13A, 2B	—	fair	
Note: There is no sign of reopening the box to bury the second person, neither of disturbance.									
97	0.40 (19.20)	N.W.	—	Adult? Adult?	Extended on back, slightly disturbed. Fractional burial. Sixteen skulls without bodies, two portions of a third corpse.	— 2B	—	bad	photo Fig. 65
Note: The complete corpse was buried first with the pot and in the right position, then the skulls and the fragments of the other two corpses were interred.									
98	0.90 (19.60)	N.W.	In sand	Child	Body disturbed, originally extended.	— 567 445 13E, 6B	—	bad	—
99	0.40 (19.50)	N.W.	In sand	Child	Extended, right hand on pelvis, face eastward.	— —	—	very bad	—
100	1.80 (21.00)	N.W.	In sand	Child	Body placed on right side, skull crushed, disturbed.	— —	—	very bad	—
				Child	Skull and vertebrae only.	— —	—	—	—
101	1.00 (19.65)	N.W.	On libn floor	Adult?	Extended on back, hands near pelvis.	— —	520	bad	—
				Adult?	Extended on back, face upward.	c. 167 641 13D, 7A, 1C	—	bad	—
Note: The dish type 7A and the cup type 1C belong to the first but were found beneath the second corpse.									
102	0.80 (20.55)	N.W.	Libn box	Adult male	Extended on back; hands near pelvis, face upward.	c. 160 —	—	fair	—
103	1.50 (21.35)	S.E.	In sand	Child	Embryonic position, face westward.	— —	—	bad	—
104	0.80 (19.60)	N.W.	Libn box	Adult?	Fractional burial, skull fallen, legs missing.	— —	—	very bad	—
Note: Part of the box was destroyed when a space with a box of another burial was constructed.									
105	1.00 (20.00)	N.W.	Libn box	Child	Extended on back, face upward, hands extended	— 13A, 1B, 5C	two clay pellets	fair	—
106	1.50 (20.10)	N.W.	Sealed libn box	Adult?	Extended on back, hands near pelvis.	5A, 1C two of 13E	Fish bones in the dish,	fair	—
				Adult?	Extended slightly on left, side, hands near pelvis.	5C, 1B 702	and cup	—	

No. of grave	Level	Ori-entation	Type	Sex Age	Position	Pottery Size types	Other Objects	Pres-ervation	Photo Diagram
107	0.55 (19.50)	N.W.	Libn box	Adult female Child	Extended on back, face upward hands extended Seated on shoulder of the female, with the right hand on her head.	c. 11 5C, 1B, 2B near right foot, 6A, 1B to the left of the child		fair	Diag. Fig. 63
108	1.25 (19.15)	N.W.	Libn box	Child	Extended on back (disturbed).	589 446 13E, 6A, 1A	Band of red stone beads around hips.	bad	
109	1.20 (19.90)	N.W.	Sealed libn box	Adult	Extended on back, right hand near pelvis face upward.	c. 170 503 2A with vertical handle 657 454 6B, 8A.	—	Fair	
Note: Skull is comparatively small.									
110	1.30 (20.10)	N.W.	Libn box	Girl of 15 years	Extended on back, skull fallen.	— 610 460 448 — 1B, 5C 13B	Frit beads at back the right side of neck	—	
111	1.20 (20.00)	N.W.	In sand	Adult female	Body on back, face upwards, hands straight.	— 558 1B	—	bad	
Note: Feet and parts of legs missing due to an old pit dug after interment.									
112	1.20 (19.90)	N.W.	Libn box	Adult male Child Adult female	Extended on back face upward, hands near pelvis. Disturbed, skull higher in the box. Body on back, legs crossed at feet hands near pelvis.	— 7B, 5A, 13E 1B, 12C 13C, 4B	—	fair	photo Fig. 64
Note: the first two corpses were buried first, and separated from the third corpse by a layer of earth 10 cms. thick. The skull of the child was found when the third corpse was interred, and was removed and placed on top of the female body and then the box was covered with libn extending outside the box.									
113	Surface					664 652 544 5A, 13D 8A			
114	1.50 (21.00)	N.W.	Sealed libn box	Child	Extended on back face westward, hands near pelvis.	c. 58 710 12C 5R	Band of two bad rows of frit beads around knees. Another band of the same beads round hips.		Diagram Fig. 63
115	0.70 (19.40)	N.W.	In debris	Child	Fractional burial, legs and chest in one place and smashed skull and arms in another.	— 5C, 13A	—	very bad	

No. of grave	Level	Orientation	Type	Sex Age	Position	Size	Pottery types	Other Objects	Preservation	Photo Diagram
116	0.50 (19.50)	N.W.	Libn box	Adult female	Extended on back, face upward.	—	690 437 5A, 5A	—	fair	
				Adult male	Body on back, face upwards, hands near pelvis, knees slightly bent.	—	570 12A 1A	—	bad	

Note: The two corpses are separated with thin layer of sand, pottery may belong to the second corpse, near whose right foot the pottery is placed

117	1.10 (20.00)	N.W.	Sealed libn box	female child	Extended on back, face upward, ribs and arms slightly disturbed.	c. 86	511 539 5A, 9A 452 552 8B, 1B	—	bad	
118	0.40 (20.00)	N.W.	Sealed libn box cover extending outside the box	Adult?	Extended on back, face slightly westward, left arm near pelvis	c. 160	488 6A, 1B, 13C	—	—	

Note: The libn box was broken through near the skull where the legs of another corpse were placed.

119	1.50 (20.50)	N.W.	Libn box, with libn placed on edge	Infant	Fractional burial skull in N.W.	—	589 1B	—	very bad	
120	2.25 (23.25)	N.W.	Libn box	Adult? male?	Body on back, skull east of the left arm lower jaw east of the left leg. (Fractional burial).	—	—	—	bad, skull preserved	

Remarks: The box was wrongly oriented and it seems that it was prepared before interment, so that the corpse had to be placed diagonally in order to be in the right orientation.

121	0.60 (19.50)	N.W.	In sand	Adult male	Extended on back, face westward, hands near pelvis.	c. 165	13E	—	fair	
				Adult female	Extended on back, face eastward.	c. 161	—	—	fair	

Note: The female corpse is partly over the male, separated by thin layer of sand.

122	1.75 (20.55)	N.W.	In sand	Child	Body on back, face eastward, legs disturbed, knees probably bent.	—	896 120 130 647 4A	—	bad	
123	1.50 (21.50)	N.W.	Libn box	Adult male	Extended on back, face slightly eastward, hands beside legs.	c. 170	5A, 13C, 1C	Stone dish beneath skull.	fair	

Note: Another skull was found to the east of the head of the corpse, but 20 cm higher.

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
124	1.50 (21.50)	N.W.	Libn box	Infant	Body on back, face upward.	— —	—	bad	
125	0.30 (20.50)	N.W.	On libn platform	Child	Extended on back, face upward.	— 687 708 3B, 5A	—	bad	
126 and 127	Not recorded								
128	2.50 (21.00)	N.W.	Libn box	Adult?	Extended on back, hands on legs skull fallen.	Bowl of three petals shape	—	fair	
129	2.00 (22.15)	N.W.	Sealed libn box	Child	Body on back, face slightly westward, hands extended, knees slightly bent.	c. 60 532 4A near right soulder	—	bad	Diagram Fig. 63f
Note: The floor of the box was paved with bitumen, and the corpse wrapped with mat.									
130	1.20 (20.50)	N.W.	Libn box	Adult female	Extended on back, hands near pelvis, face upward.	C.155 502 582 6A, 1B 13E	—	fair	
131	1.20 (20.05)	N.W.	In sand	Adult male	Extended on back, face slightly eastward, hands near pelvis.	— 459 5A 13A	—	fair	
132	1.80 (20.80)	N.W.	Sealed libn box	Adult female	Extended on back; hands near pelvis; face upward.	— 685 with handle 11B 686 1A, 5D, 10A near right shoulder	—	fair	Diagram Fig. 63
133	1.70 (21.50)	N.W.	Libn box	Adult female?	Extended on back; hands near pelvis; face upward	c.160 13B, 1C, 5A near left foot	—	fair	
134	1.50 (20.90)	N.W.	In sand	Adult female	Extended on back; face upward; hands extended	c. 165 480 581 5C, 1C two of 13E	—	skull excellent body fair	
135	1.25 (19.90)	N.W.	On sand	Adult male	Extended on back; face slightly eastward, hands near pelvis.	c. 184 585 541 13E, 3B	—	bad	
136	1.25 (19.90)	N.W.	Libn box	Adult female	Disturbed; body on back, legs extended, but not in line with the spine; skull smashed.	— 458 564 6A, 1B 608 13C	—	bad	
137	1.00 (19.90)	N.W.	In debris	Adult female?	Skull, shoulder and part of the chest are missing due to an old pit, legs are extended, right hand near pelvis.	— —	band of white and black beads around knees, other beads near elbows.	bad	Diagram Fig.63
138	1.70 (20.50)	N.W.	Libn box	Adult female	Extended on back, face upward, right hand near pelvis, left straight	c.175 444 628 5A, 12A	—	fair	

Note: Some Hajji Mohammed sherds in debris with which tomb was filled, meat-bones deposited above filling.

No. of grave	Level	Orientation	Type	Sex Age	Position	Size	Pottery types	Other Objects	Preservation	Photo Diagram
139	1.00 (19.65)	N.W.	Sealed libn box filled with sand.	Child	Extended on back, face upward; hands extended	—	440 553 3B, 6A, 1B.	—	fair	
140	1.20 (19.90)	N.W.	In sand	Child	Extended on back; face upward; the right knee slightly flexed.	—	6A, 2A	—	very bad	
141	2.30 (21.00)	N.W.	In sand	Child	Extended on back, hands straight; face upwards.	—	—	—	bad	
142	1.25 (19.90)	N.W.	In sand	Adult male	Extended on back, hands at sides; face upward.	c. 165	560 580 586 5A, 1B, 13E	—	fair	
143	2.00 (20.80)	N.W.	In sand	Adult female	Extended on back, face slightly eastward.	c. 180	660 449 5A, 1B, 13A	—	fair	
144	0.80 (19.60)	N.W.	Libn box	—	No human remains.	—	451 5C, 8B	—	—	
145	1.00 (21.20)	N.W.	Libn box	Adult?	Body on back; face upward, hands near pelvis, legs bent backward.	—	576 6A, 13C near right shoulder	—	bad	
Note: Another single skull was found on the right side of this burial.										
146	0.80 (20.95)	N.W.	In debris over the sand		Body on left side; face eastward; left hand touching chin, right arm bent over the body; legs flexed at knees.	—	—	—	bad	
147	1.25 (21.25)	N.W.	In sand	Adult female	Body on back; hands near pelvis; face upward; legs bent westward.	—	468 522 8C, 7B near right shoulder	—	bad	
148	2.00 (22.00)	N.	In sand	?	Extended on back; skull missing.	—	13C	—	bad	
149	0.50 (20.70)	N.W.	On libn platform, covered with sand	Child	Extended on back, face slightly westward.	c. 108	5C, 13E	Skull of an animal near right foot	bad	—
150	2.00 (22.00)	N.W.	In sand	Adult male	Disturbed; body on back, hands near pelvis; skull collapsed; legs crossed.	—	580 5C, 8A, 13D	—	bad	—
151	1.25 (21.40)	N.W.	In debris	Child Adult male	Extended; head missing; body on back; legs slightly bent; hands near pelvis; head missing.	c. 165	577 5A, 9C, 1C	—	bad	—

Note: Both skulls are missing due to an old pit.

No. of grave	Level	Orientation	Type	Sex Age	Position	Pottery Size types	Other Objects	Preservation	Photo Diagram
152	1.50 (20.15)	N.W.	In sand	Adult female	Extended on back; hands near pelvis; face upward.	c. 150 13A, 5B 466 5B	—	fair	—
153	2.00 (20.65)	N.W.	In sand	Child	Body on back; face upward; legs crossed	c. 89 441 6A, 11A, 5C 891 12C	—	fair	—
154									
155	1.00 (21.15)	N.W.	Libn box?	Adult female	Extended on back; left hand near pelvis.	— 13C	—	bad	—
				Adult	Disturbed when the second corpse was interred above it.	— 12C, 5C	—	bad	—
Note: Libn box incomplete.									
156	Not recorded								
157	1.20 (20.30)	N.W.	Libn box	Child	Body on back; face upward; hands near pelvis; legs slightly flexed.	c. 100 482 470 636 6A 1C 12A	—	fair	—
158	1.80 (21.05)	N.W.	Libn box	Adult female	Extended on back; hands straight; face slightly eastward.	c. 150 607 571 1A, 4B 5C	Cowrie shell and two frit beads, found on chest.	fair	—
159	1.20 (20.20)	N.W.	Libn box	Old male	Body on back; right hand straight; left near pelvis; face slightly westward.	c. 170 501 524 599 7A, 1A, 12A	—	bad	—
160	Not recorded								
161	2.00 (21.00)	N.W.	Libn box	Adult male	Extended on back; right hand over pelvis; face slightly eastward.	c. 160 597 5C, 1B 13D	—	bad	—
162	1.10 (20.00)	N.W.	Sealed libn box	Adult male	Extended on back; hands near pelvis; face upward.	c. 165 692 700 6B, 5C, 1B	—	bad	—
163	2.25 (21.50)	N.W.	Libn box	Young female	Disturbed; body on back legs flexed; face westward.	— 1B, 3B, 6A	—	fair	—
Note: Another skull was found in the same box on the left of the skeleton.									
164	0.80 (21.00)	N.W.	Libn box	Adult male	Disturbed by secondary interment, extended face upward.	— 6D	—	bad	—
				Adult female	Extended on back; hands near pelvis; face upward.				
165	1.25 (19.50)	N.W.	Libn box	Adult male	Extended on back; face upward, hands near pelvis.	c. 160 644 1B	—	fair	—
166	1.00 (21.30)	N.W.	In sand	Child	Extended on back; face slightly westward.	— —	—	bad	—

No. of grave	Level	Ori-entation	Type	Sex Age	Position	Pottery Size types	Other Objects	Pres-ervation	Photo Diagram
167	1.80 (20.80)	N.W.	In sand	Child	Extended on back; right hand near chin; face slightly eastward.	— 559 507 1C, 3A	—	bad	—
Note: It is possible that the pottery did not belong to this burial.									
168	0.20 (20.35)	N.W.	On debris	Adult female	Body on back; right hands on chest; legs flexed.	— —	—	fair	—
169	2.00 (22.15)	E.	In sand	Infant	Body extended; face upward.	— 538 12A with two handles 575 4A, 7D	—	bad	—
170	2.00 (20.60)	N.W.	On sand	Adult female	Extended on back; hands extended; face upward.	— 486 561 6A, 1B	—	bad	—
171	1.50 (20.15)	N.W.	Libn box	Adult female	Extended on back; hands near pelvis; face upward	C.155 6B, 1B, 12B	—	fair	—
172	1.40 (21.05)	N.W.	Libn box	Adult female	Extended on back, right hand near pelvis; left hand extended; face slightly eastward.	C.160 493 651 672 6A 1B 13C 648 13D	—	bad	—
173	2.00 (20.50)	N.W.	In sand	Adult female	Extended back; hands straight, face slightly eastward; the right femur out of position, laid across the pelvis.	c.172 514 591 7A 1B	—	bad	—
174	1.80 (21.50)	N.W.	Libn box	Child	Extended on back.	— 540 573 5A, 4A, 7A with incisions inside	3 cm bands of frit below knees	bad	—
175	1.40 (20.50)	N.W.	Sealed libn box	Adult female	Extended on back; hands near pelvis; face westward.	c.158 13A, 7A	—	fair	—
176	1.40 (20.50)	N.W.	On libn floor	Child	Body on back; face upward.	— 4A	—	bad	—
177	1.40 (20.50)	N.W.	Libn box	Adult female	Extended on back; right arm bent over the chest left arm straight.	c.154 —	—	bad	—
178	1.60 (20.50)	N.W.	—	Adult female	Extended on back; hands straight; face slightly eastward.	c.160 572 8C	—	fair	—
179	1.30 (20.50)	N.W.	Libn box	Young female	Extended on back; right hand on pelvis, left extended, face upward.	c.108 698 704 5C, 13E 1B	—	good	—
180	1.40 (20.50)	N.W.	Libn box	Adult?	Disturbed when a second corpse was interred.	— —	—	bad	—
				Adult?	Body on back; face upward.	— —	—	bad	—

No. of grave	Level	Orientation	Type	Sex	Age	Position	Size	Pottery types	Other Objects	Preservation	Photo Diagram
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Note: The legs in both cases are missing due to an old pit.

181	1.70 (20.10)	N.W.	Libn box	Adult female?		Extended on back; face upward; right hand near pelvis.	c. 150	693 518 518 1C, 6A, 5A 595 12A	—	fair	—
182	1.40 (20.00)	N.W.	Libn box	Child		Extended on back; face upward.	c. 110	614 12A, 8B, 5C	—	bad	—
183	1.20 (19.50)	N.W.	In debris	Adult female		Disturbed. Extended on back.	—	6A, 12C	—	bad	—
				Adult male		Extended on back; face upward; hands near pelvis.	c. 158	13A, 1B	—	bad	—

Note: The male corpse was buried first.

184	1.00 (21.15)	N.W.	Shaft in an older box	Child?		Body on back; face westward; legs flexed.	—	696 5A, 13E	—	bad	—
185	1.00 (20.80)	N.W.	Libn box	Youth		Extended on back.	—	—	—	—	Photo Fig. 66 Diagram Fig. 63

Note: The complete skeleton of a dog? was found in box, separated from the corpse by a thin layer of earth. The dog is laid on its left side across the human skeleton, with its head to the south.

186	1.10 (20.20)	N.W.	Libn box	Adult male		Disturbed when the second corpse was buried.	—	701 703 12B 5C	—	bad	—
				Adult female		Extended on back, face upward; hands near pelvis.	C.131	4B	Frit beads near pelvis	fair	—
187	1.35 (21.50)					Empty					
188	1.40 (20.00)	N.W.	Sealed libn box			Body laid on back, face upward.	—	688 2B, 5A, 1A	—	bad	—

Remark: The legs are missing.

189	1.00 (19.50)	N.W.	Libn box	Adult?		Extended on back; face upward; hand extended.	—	5A, 13E, 12C	—	fair	—
				Adult?		Skull near the left shoulder.					

Note: A fragment of a large pottery bowl found laid on the chest

191	Surface 1.50 (21.70)	N.W.	Libn box	Infant		Body on back.	—	—	—	very bad	—
192	1.80 (21.00)	N.W.	Libn box	Adult?		Extended on back, right arm bent on body; left straight; face eastward.	C. 165	—	—	bad	—
193	1.30 (21.05)	N.W.	Libn box	Adult?		Extended on back, face upward & arms straight	—	5C, 1B, 13C 13A	—	fair	—

CHAPTER 4 THE HISTORY OF POTTERY

The history of pottery is a long and varied one, spanning thousands of years and many different cultures. It is a craft that has been practiced in almost every part of the world, and it has played a central role in human civilization. From the simple, utilitarian vessels of the Neolithic period to the intricate, decorative pieces of the Renaissance, pottery has been a constant presence in our lives. The history of pottery is a testament to the human ability to create and innovate, and it is a testament to the enduring power of this ancient craft.

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CHAPTER 5 POTTERY

A. Protoliterate and Early Uruk Wares

After the first season's work at Eridu, an interim report was published in the Journal "Sumer" (Vol. III, No. 2, July 1947), and in the following issue (January 1948) this was followed by a preliminary study and general tabulation of the pottery so far found belonging to the Early Uruk and protoliterate periods. Incorporated in this article, was a fairly comprehensive review of all the pottery discovered elsewhere, which could be dated to what has hitherto been known as the "Uruk period", together with some details of its provenance, and, as far as is known, its present whereabouts. In the second season, as it proved, very little was added to the material of this sort already assembled, and for the purposes of the final report, it has accordingly seemed to us worthwhile to recapitulate the greater part of the article in question, and so assure for it a wider circulation.

As we observed at the time, characteristic pottery of the Uruk period was in the past derived from many of the more important excavations, and has, in some cases been adequately published. Yet the published material itself is sometimes hard to locate, while unpublished examples have occasionally found their way into the Iraq Museum. In the diagrams which accompanied the article (Figs. 69-71), we therefore assembled, as far as possible, all the pertinent material, ranging our own Eridu shapes for comparison beside similar discoveries from a wide variety of sources. For purposes of easy reference to the provenance of these, a general summary of occurrences was also provided, and may here also be reproduced.

Schedule of Occurrences

1. WARKA

The earliest identification of the Uruk ceramic as the main criterion of a separate cultural phase, was made on

the basis of pottery discovered by Heinrich in a stratigraphical sounding beneath the Eanna precinct at Warka in the season 1931-32.

Eighteen "archaic levels" were recognised, and numbered I-XVIII, from the surface downwards. The characteristic wares, black, gray or red-slipped, burnished or polished, predominated in Levels XIV-V and survived in lesser quantities alongside Jemdet Nasr painted ware in Levels IV-II. A parallel series of characteristic unpainted wares were recognised and classified in main categories, such as "hand-made" and "wheel-made"⁹⁹ with further typological sub-divisions. Many of the latter were observed to make their first appearance in Level VI, simultaneously with traces of the earliest temple-building in *riemchen* bricks, cone-mosaic ornament and the first use of the cylinder-seal. The whole of the material was published, with commendable lucidity in the text and considerable obscurity in the drawings, due to congestion and over-reduction, by Noldeke, et al., in *Vorläufiger bericht über die Notgemeinschaft der deutschen Wissenschaft in Uruk unternommenen Ausgrabungen*. No. IV, 1932. Less than half-a-dozen sherds appear to have reached the Iraq Museum. The remainder are presumably in Berlin.

2. UR

Previous to the above discoveries and their interpretation, Sir Leonard Woolley had already, during his 1929-1930 season at Ur, encountered pottery of the Uruk type, in the large-scale sounding known as the "Flood excavation" in the "Town Area". These wares which are described as — "plain red nearly always burnished but with a few plum-coloured pieces", occurred between 5.20 and 8.60 metres above sea-level, and were accompanied by Al'Ubaid painted sherds in lesser quantities. They were superseded in higher levels by

1.	ERIOU EARLY URUK	URUK LEVELS XIV-VI	TELLOH CLASSE'	UR	UQAR UNEXCAVATED LEVELS	NINEVEH LEVEL IV	GAMRA LEVELS V-VIII	GRAI RESH
			<p>UNPUBLISHED</p>			<p>OCCURS IN UBAID LEVELS ONLY</p>		<p>URUK RED WARE</p>
2.	ERIOU EARLY URUK	URUK LEVELS XV-VI	TELLOH	UR	UQAR UNSTRATIFIED	NINEVEH LEVEL III	GAMRA LEVEL VII	GRAI RESH LEVELS II-IV
<p>FIG-69</p>		<p>UNPUBLISHED</p>	<p>REMOVED</p>					

VOTIVE BOWLS	SPOUTED SHOULDER-SPOUTS.	JARS CURVED SPOUTS	RIM-SPOUTS.	3
				ERIDU [LAYER III - VII]
				URUK [LAYER III - VI]
				TELLIH [LAYER III - VII]
	<p>EARLY URUK LEVELS UNEXCAVATED.</p>			UQAIR [LAYER III - VII]
				NINEVEH [LAYER III - VII]
		<p>INCOMPLETELY PUBLISHED</p>		GAWRA [LAYER III - VII]

FIG. 70

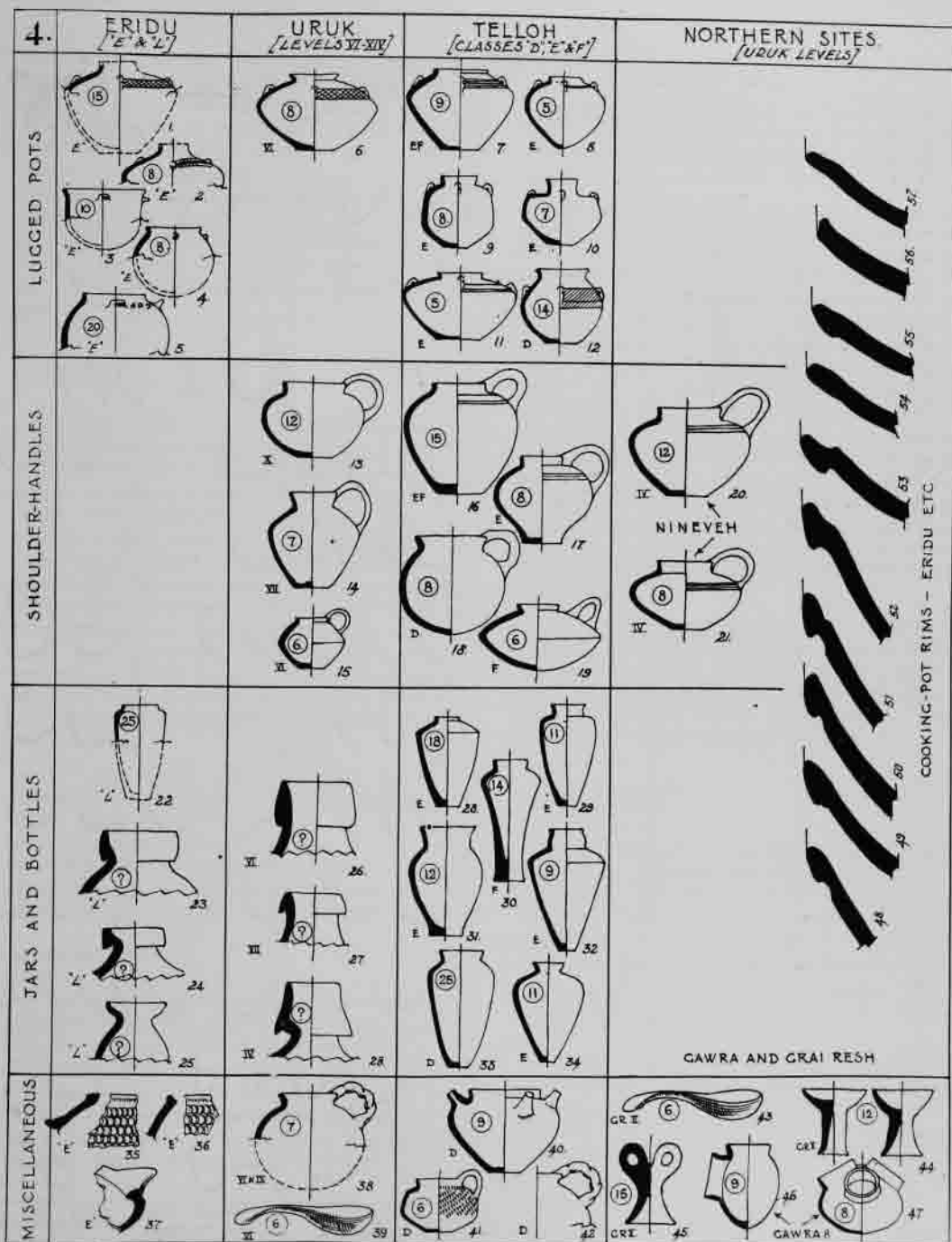


FIG. 71

characteristic Jemdet Nasr pottery. One pot, reconstructed in the Iraq Museum (IM. 21897, No. 31 in our Table No. 2) is assumed to be derived from this source. For the rest, no details of shapes were published in the report. (*Antiquaries Journal*, Vol. X, p. 329 *et seq.*) but in a subsequent publication by the excavator (*The Development of Sumerian Art*, London 1935), two plates have photographs of pottery associated in the text (p. 49) with the Uruk period. The majority of these shapes, however, have much closer affinities with Jemdet Nasr and are indeed mostly derived from a cemetery of that period.

3. TELLOH

Important pottery of the Uruk period is derived from a sounding to virgin soil, made by de Genouillac, during his 1930-1931, season in about the centre of the "East Mound" at Telloh. In a depth of fourteen metres, eleven "levels" were distinguished of these, level 1 dated from the Early Dynastic period, while Level 2 consisted of a sterile layer, presumably representing Jemdet Nasr. Beneath this were nine levels (3-11), dated by an abundance of Uruk pottery, of which the two lowest (10 & 11) contained some traces of Al'Ubaid wares. The Uruk levels were somewhat arbitrarily divided into two imaginary sub-phases (Levels 3-7 and 8-11) associated, apparently owing to a misunderstanding of Heinrich's then recently published stratification, with Archaic Levels IV & V at Warka.

The Uruk pottery from this source was most adequately published by de Genouillac in *Fouilles de Telloh*. (Paris 1934) Vol. 1, with excellent drawings, photographs and colour-reproductions, in which his earlier and later Uruk phases are distinguished by the letters "D" and "E" respectively. Some examples of actual pots-are, we imagine, accessible in the Louvre.

4. 'UQAIR

A small quantity of Uruk pottery was found during our own excavations in the years 1940-1941 at Tell Al'Uqair. This was mostly associated with the "Painted Temple" in Level VII or with its subsequent rebuildings in Levels VI & V. Some shapes and other details are recorded in the publication (*Journal of Near Eastern Studies*, Vol. II, No. 2, April, 1943). One burnished pot is in the Iraq Museum. (Table 1, No. 32).

5. NINEVEH

Characteristic Uruk wares were first discovered in North Iraq by Mallowan at Nineveh, in the season 1931-1932, when a deep sounding was made in the Kuyunjik mound.

The pit reached virgin soil twenty seven metres beneath the modern surface of the mound, and in this depth five "prehistoric" phases were distinguished, and numbered from the bottom upwards. In phase 1 & 2 the four classes of painted pottery, usually encountered, in North Iraq and connected with the names Hassuna, Samarra, Tell Halaf, and Al'Ubaid, were all successively represented. Phase 3 was characterised by typical Uruk "gray" ware, whereas the corresponding "red-slip" wares did not appear until Phase 4, which was associated by the excavators, (as we now suppose on inadequate grounds), with the Jemdet Nasr period. It will presently be seen that there is much evidence to suggest the identification of Phases 3 & 4 with earlier and later subdivisions of the Uruk period. The most notable feature of Phase 5 is the remarkable pottery hitherto associated in the North with the beginning of the Early Dynastic period (Ninevite 5).

The results of this sounding were published by Campbell Thompson in the *Liverpool Annals of Art and Archaeology* Vol. XX, 1932, p. 71 *et seq* where the illustrations suffer a little from the loose association of pottery from different levels in the same plates. A few sherds from each level are in the Iraq Museum.

6. TEPE GAWRA

Excavations directed successively by Speiser and Bache at Tepe Gawra and Tell Billah from 1931 till 1938, threw further light on the later prehistoric periods in North Iraq. A first volume of the final publication, dealing with Levels I-VIII (from the surface downwards appeared in 1935). (E.A. Speiser, *Excavations at Tepe Gawra*, Vol. I, Unfortunately Vol. II of the report, published by A.J. Tobler in 1950, appeared after this section of the text was written.)

In his volume I and comments in subsequent communications from the field, Speiser attributes Levels VII-XI to the Uruk period and finds Uruk criteria accompanied by Ubaid painted pottery in Level XII. Level VII is identified with the Jemdet Nasr period, though here again there are significant survivals from the previous

phase.

There is one example of the "gray" ware from Gawra in the Iraq Museum (IM. 26616), a squat pot with a flared rim from Level XII (No. 30 wrongly placed in Table 2, under Ur).

7. GRAI RESH

By far the most plentiful supply of Uruk "gray" wares and some other classes, were obtained as a result of a short sounding made by ourselves at Grai Resh in the Sinjar district in 1939. Here Levels II-IV (numbered downwards) produced exclusively Uruk pottery. In Level V it was accompanied by Ubaid wares, and it disappears in Level VI.

The sounding was published in the journal, *Iraq*, Vol. VII Part I, in 1940, and all the material obtained is in the Iraq Museum.

8. Other Sites

Minor occurrences of Uruk pottery, never published in detail, are recorded from the following sites:

AI 'UBAID

KISH

KHAFAJE. Published by University of Chicago. P. Delougay "Pottery from the Diyala region" in 1952 P. 34 (after this Chapter was written).

The Eridu Occurrences

It will next be well to give some further account of the new, large-scale occurrence of Uruk pottery at Eridu, already referred to in a preliminary communication on our first season's excavations at Abu Shahrein (1946-1947), published in *Sumer*.

The pottery in question is derived for the most part from the excavation of two non-secular buildings, situated in squares H/5 and EF/4. (See site-plan Fig. 3), and to a lesser extent from the temple-ruins in EF/7. It is fairly rigidly divisible into two separate groups, owing to the following sequence of events. After an extremely short occupation the two first-mentioned buildings were abandoned, and their chambers gradually filled with drifting sand. At various stages during this process, religious offerings were deposited in them, as witnessed by neat groups of votive vessels, bedded in the clean sand at varying heights. Finally, when only the tops

of the walls remained exposed, the site was levelled and prepared for re-building. For this purpose a deep bed of rubble was laid consisting of **debris** from buildings demonstrably later in date than that beneath the sand. The earlier group (I) of pottery is derived from the two buildings themselves and the votive groups in their sand-filling, supplemented by a rich deposit from a contemporary out-building in square H/5. The latter group (II) comes from the rubble filling referred to above, and from fallen **debris** adjoining the late Uruk temple-platform in square EF/7.

Types represented in the two groups have been classified by us as follows:

Group I

- a. 'Uruk Gray' ware.
- b. 'Uruk Red' ware
- c. Jars with spouts directly beneath rim
- d. Jars with straight spouts at shoulder
- e. Plain hand-made beakers
- f. Pots ornamented with lugs
- g. Pots ornamented with incised cross-hatching, crescents etc.
- h. Miscellaneous features.

Group II

- a. Jars with curved spout at shoulder
- b. 'Votive bowls with bevelled rim'
- c. Tall jars and bottles with "folded over" rims

Uruk Red Ware (Table 1)

This ware is plentifully represented at Eridu in the H/5 out-house group. At least four complete shapes could be reconstructed, one of which (No. 2) was ornamented with pierced lugs at the shoulder. They are composed of medium-fine, pink or brown clay covered outside only with a red slip (Nos. 1, 2 & 3) or wash (No. 4) and burnished with a bone or pebble.

The original "red-slip" ware (**rot engobierte Ware**) from Warka is almost identical, being described as medium to fine-grained, reddish or brick-red, very well-backed clay, red-slipped and polished (**rot engobiert und poliert**) or covered with a fine red colour wash, burnished and baked (**mit einer feinen roten Farbschicht Überzogen, geglättet und gebrannt**). It appears in sufficient quantities to be characteristic of Levels XIV-VI, and though complete pots are extremely rare, a wide variety of shapes are represented among the sherds (Nos.

15-45).

The two main categories are bowls with straight (Nos. 25-30) or everted (34-45) necks. Pierced lugs begin to be an attribute of the latter in Level VII, and reach maturity in Level VI with a squat pot (No. 6 in Table 4) ornamented with four horizontally pierced "beak-lugs" on the shoulder, and an incised band of double cross-hatching (netzmuster) between them. Other forms of incised ornament are parallel lines, "finger-nail" incisions (**fingernageleindrucken**) and "rocker-ornament". Spouts occur (No. 6) and bottoms may be either flat, round or pointed.

"Red" wares at **Telloh** (ceramique rouge) occur in both Uruk phases, "D" and "E" (erroneously associated by de Genouillac with Level IV and V at Warka). They are described as having a fine red slip on pink clay, (**engobe rouge, léger et fragile, sur terre cuite rose**), but the presence or absence of burnishing is not always specified. Shapes are numerous (**vases, urnes, cratere, verseuse, flacons, tasses, cuvettes etc.**), but the best preserved specimens, all from phase "E" are squat pots with short necks or everted rims, bottoms, flat or ring-based ornamented with horizontally or vertically-pierced lugs (Nos. 7, 8 & 9). In one case (No. 10) these are connected by a band of incised ornament surmounting a row of "nipples". Shoulder-handles and spouts are also a fairly common feature.

From **Ur** no examples of "red" wares were published, while at **Uqair** we assume it would be likely to appear in levels of the earlier Uruk period, not yet reached.

Turning to **North Iraq**, at **Nineveh**, the "red" ware, appears in Level IV, apparently superseding the "gray" ware of level III. This would give the two wares in the north a relationship in time which is not as yet confirmed at other sites. In Nineveh IV many characteristic features of "red" ware in the south are present. Campbell Thompson says that the slip is at first friable but later more stable: horizontally pierced "back" lugs are common (Nos. 11 & "nipples" between. Round, flat and ringed bases all occur.

Amongst the published pottery from Tepe Gawra there are isolated examples or red-slipped and burnished ware both in Level VII and Level VIII. Examples from earlier levels now in the Iraq Museum include two large, spherical jars with small, everted rims (IM. 32667 & 33494

Nos. 12A & B in Table No. 1) and a much smaller pot with a widely flared rim (IM. 26639, No. 14A), all from Level XII.

At **Grai Resh** there were no traces of red wares in the Uruk levels. This could be due to the fact that the site appeared to have been temporarily deserted directly after the gray ware period. On the other hand the most distinctive red wares did appear in the later Al'Ubaid levels. These were for the most part of pink clay with a highly polished, bright-red slip, a common shape was a spherical pot with a widely flared rim, similar to the Uruk rimsherd, No. 45 in Table No. 1. Accompanying this was a buff coloured ware with a "smeared" red wash.

Uruk Gray Ware (Table 2) in D 3

This ware is represented at Eridu by several rimsherds of simple bowls (e.g. Table 2, No. 1) from the out-house in H/5. They are of rather fine, gray clay, slipped and pebble-burnished inside and out.

At **Warka** it corresponds to the **grau engobierte Uruk-Ware**, which is described as being composed of medium-fine reddish-gray clay, well or fairly well baked, covered with a fine, gray slip and burnished (**mit einer sehr dünnen grauen Feinschicht überzogen und geglättet**). It starts, simultaneously with the "red" ware, in Level XIV preferring carinated rim-shapes (Nos. 7-10); shows a variety of bowl and jar rims in Levels XIII-VIII, jars with everted rims or short necks in Level VII (Nos. 12-20) as well as handles (No. 27) and spouts (No. 28); and ends at Level VI with curious, widely everted and flattened rims. Bases throughout can be either round or flat.

At **Telloh** Uruk "gray" ware is almost unrepresented: a few sherds appear in the earliest Uruk levels only.

At **Ur** it is said to have occurred in small quantities parallel to the "red" ware, but is unrecorded save for a vessel appearing in a photograph⁽⁴⁰⁾, described as "light gray ware", whose shape suggests the clay imitation of a stone vessel in the Jemdet Nasr period.

Three bowl-types in gray ware from **Uqair** (Nos. 33, 34 & 35) were found among the ruins of the "painted Temple", but could be survivals from earlier strata. The fourth example (No. 32), which was stratified at Level V in "Sounding I", is more brown than gray and very highly

39. Uruk "red" and "gray" wares are almost invariably wheel-made.

40. Woolley, *Development of Sumerian Art*, Plate 10e

burnished.

In North Iraq, Uruk "gray" wares are slightly more plentiful than in the south. At **Nineveh** they are a primary characteristic of Phase III. Two principal shapes are a wide squat hole-mouthed pot generally used for infant burials (No. 36), and less well-made bowls for domestic purposes (Nos. 37-40). Campbell Thompson describes this ware as "highly carbonised in section", and calls No. 41 "a wheel-made ribbed vessel of dark greenish-gray clay", burnished and with a soapy feel.

Amongst the published pottery from **Tepe Gawra** there are two examples of gray burnished ware from Level VIII one of which (No. 44) has fine incised ornament, and another a ring-base (No. 42, from Level VII).

By far the most plentiful examples of "gray" Uruk ware in the North come from **Grai Resh**. There are two principal types; first, the squat-bellied hole-mouthed pot with ridged rim (Nos. 54 & 55. Some examples of variations on this theme are Nos. 45-49); and secondly the bowl with ridged rim and occasional carination just beneath it (Nos. 56, 57 & 59. Rim varieties Nos. 5-53). The latter is often used as a lid for the former in infant burials. The burnishing here is on a gray slip, over fine gray clay, and may vary from loose pebble-burnishing to a semi-polish, inside or outside the vessel.

Black Polished Ware

Black wares with a high polish, sometimes suggesting the use of a "smother-kiln" are characteristic of the Uruk period at several sites, including **Uruk** (Level XI upwards), **Telloh** (*teisons a lustre noir sur poterie grise*), **Ur** (e.g. *Development Sumerian Art. Plate X d*), **Uqair** and **Nineveh** ("jet-black, highly carbonised"). Compared to the "red" and "gray" wares however, the black appears in extremely small quantities and no shapes have been reliably recorded.

Painted Ornament

In the earlier Uruk levels at **Warka**, (Noldeke, *Ausgrabungen in Uruk, 1931-1932, Taf. 21*), as also in the early group from **Eridu**, (unpublished), there are a few examples of pottery with painted ornament. The character both of pattern and paint differs widely, and the ornament is completely un-stylised; so that it is tempting to dismiss this occurrence as a chance survival of an earlier craft.

Plain Pottery

Spouted Vessels (Table No. 3)

Spouted pots (Tullenkannen) of all sorts are extremely common among Uruk shapes, and acquire an extra importance because one particular variety, namely that with a curved spout (*bec courbe*), may, we believe, be treated as a reliable dating-criterion for the second sub-phase of the Uruk period.

In its most usual form the curved spout springs from the shoulder of a rather tall jar with narrow neck and everted rim. At Eridu fragments of these are exclusively found in the late rubble filling deposited over the ruins of the early-Uruk buildings already discussed and in the debris fallen from the late-Uruk temple-platform (No. 9 in Table 3). As a result, though scores of these spouts have been collected, no complete vessel has yet come to light. In exactly the same way, at **Uqair** these spouts were found in association with the temple-ruins of Levels VI & VIII (No. 16). At **Warka** (gekrummter Tullen) the earliest example is in Level VII (No. 11) and they occur frequently among the building-remains above; while at **Telloh** (Nos. 12-15) they are most numerous at the close of the period. In **North Iraq** they do not occur.

Straight spouts clearly characterise the earlier group of pottery at **Eridu** (Nos. 17-22). The large, egg-shaped jar, with narrow neck and shoulder-spout appeared to constitute the principal element in each "votive group"; up to twenty of them would sometimes be included in a single group. Straight spouts occur at **Warka** as early as Level XII (No. 2), while at **Telloh** (Nos. 30-34) they are in evidence throughout the period. In the **North** they are represented in **Nineveh IV** and **Gawra VII-VIII** (perhaps lower).

One peculiar variety of straight spout, characteristic of the earlier **Eridu** group is that placed directly beneath, and sometimes touching the rim. In both examples illustrated (no. 1 & 2), there is no actual perforation of the pot, and such "false spouts" (*Scheintullen*) are indeed not uncommon in the earlier Uruk levels at **Warka** where genuine "rim-spouts" also begin at Level XIII (No. 3). There is one example in Level IV at **Nineveh** (No. 8).

Votive Bowls (Table No. 3)

The second reliable criterion of our later sub-phase of the Uruk period at **Eridu** is the now-familiar, roughly hand made, "votive bowl with bevelled rim" (*ecuelles*

grossieres, glockentopfe). The earliest example yet found (no. 40) was high up in the sand-filling of the building in square H/5; but literally hundreds of them occur in the later rubble. So also at **Warka**, isolated examples occur as early as Level XII (No. 42) but an immensely larger number were found associated with the building-levels both in the late-Uruk and Jemdet Nasr periods. At Telloh (No. 44), 'Uqair (No. 46), in Ninevite IV and Gawra VII their late popularisation is again confirmed.

In our diagram (Table No. 3) these bowls are presented side-by-side with the more ordinary hand-made votive cup or beaker, which usually precedes them in the first sub-phase (**Eridu** and **Warka**), and sometimes supersedes them in the Jemdet Nasr period ('Uqair).

Lugged Pots (Table No. 4)

Squat pots provided with horizontally-pierced beak-shaped lugs (Schnurosen) on the shoulder, are everywhere common throughout the Uruk period, as indeed they are in the preceding Al'Ubaid and succeeding Jemdet Nasr periods, an additional feature peculiar to the Uruk type is a band of incised ornament connecting the lugs (Nos. 1, 2, 6, 7, 8, 11, & 12). Common also in the early group from the out-house in H/5 at Eridu, were examples of very Anatolian-looking "ledge" and "nipple" - lugs (Nos. 3, 4 & 5).

Shoulder-handles (Table No. 4)

Round-section or strap-handles, from shoulder to rim or shoulder to shoulder, occur in both sub-phases at **Warka**, **Telloh** and **Nineveh** (Nos. 3-21). They are often combined with horizontal incised lines at the shoulder. (Nos. 16, 17, 20 & 21). None have yet been found at Eridu.

Jars and Bottles (Table No. 4)

Two further shapes characteristic at **Eridu** of the second Uruk sub-phase are, first, a tall jar with narrow shoulder and very short neck (No. 22), which has an equally late parallel at **Telloh** (No. 30), and secondly narrow bottle-necks with wide, "turned-over" rims (Nos. 23 & 24), such as occur at **Warka** as late as Level IV (Nos. 26, 27 & 28).

Miscellaneous (Table No. 4)

The majority of features in our miscellaneous

group are illustrated mainly because they are characteristic of this Uruk period in general. Some, however, are predominant in one phase only. For instance there were many examples in the earlier group at **Eridu** of sherds entirely covered with small incised crescents (e.g. Nos. 35 & 36), being really the oblique impressions of a hollow reed-end. This ornament has an exact parallel in phase "D" at **Telloh** (No. 41). A cruder form of the same ornament, impressed with the thumb or finger-nail, also appears early at **Telloh**, (**Poterie marquee a l'ongle**) and **Warka** (Fingernageleindrucken), as also in the North at **Nineveh**.

"Tab-handles" on bowl-rims, either triangular or rectangular, occur at **Eridu** (No. 37), as well as **Warka** and **Nineveh**; twisted strap-handles, at **Warka** (No. 38) and **Telloh** (No. 42); pottery ladles at **Warka**, **Telloh** and **Grai Resh** (No. 43); pots with two or more mouths at **Eridu**, **Warka**, **'Uqair**, **Gawra** etc.; "eye-symbols" (No. 45) and simple chalices (No. 44) at the northern sites only.

Some Uruk period cooking-pot rim-shapes are also illustrated (Nos. 48-57).

Conclusion

If, then, we are right in supposing that our two distinct groups of Uruk pottery at Eridu, and the architectural remains with which they are associated, represent two sub-divisions of the Uruk period, it is equally clear that at **Warka**, Level VI is the turning-point between two such phases. Innovations other than pottery, dated from this epoch include, in the realm of architecture, the sequence of archaic temples beginning with the earliest version of the "White Temple" and the "Langhof-temples in Pa XVI", the first use of **Stiftenmosaik** and **Siegelabrollungen auf Gips**. Indeed, at **Warka**, since no considerable building-remains were found earlier than Level VI, and since the dwellings of the Al'Ubaid period were still at that time thought of as "reed-huts", the first construction of a platform to support the "White Temple" was considered to mark the beginning of monumental architecture.

Other innovations such as the earliest cylinder-seals and the first appearance of archaic texts are practically contemporary.

At **Eridu** the discovery of formally-built, brick temples dating from the Al'Ubaid, have upset some previous assumptions about the origins of architecture. Yet the buildings so far excavated there, corresponding to the

pre-Warka VI" sub-phase of the Uruk period have an almost primitive simplicity, while there is at least negative evidence to confirm that they preceded the introduction of the cylinder-seal and of writing. It is equally significant that amongst the debris from which the later group of Uruk pottery is derived, though no cylinder seals or tablets are present, many familiar features of "post-Warka VI" architecture are to be found. They include **Stifen mosaik, Siegelabrollungen auf Gips**, cement bricks, bricks pierced for applied ornament and mosaic-

fragments of coloured stone, pierced for attachment.

We accordingly propose provisionally to correlate our earlier group of Uruk pottery from Eridu, and the buildings in squares in H/5 and EF/4 from which it is derived with Archaic Levels XIV to VII at Warka. The later group, partly derived from the late temple-platforms in square EF/7, must then be considered as contemporary with the archaic temples in Levels VI to III.

B. Al'ubaid Wares

In order to obtain a preliminary picture of the sources and distribution of the Al'Ubaid pottery from Eridu, it is most convenient to study the grouping of occurrences in our chart (Fig. 72). This being so, some explanation should at once be given for the absence of any quantitative analysis in Level VII. The process, which by some would be considered over-meticulous, of counting the actual number of sherds representing each type of vessel, was inaugurated in Temple VI for the purpose of incontrovertibly establishing the fact that the building dated from the Ubaid period. The results of the analysis were entirely unequivocal; so that when, later in the same season, an earlier temple (Temple VII) was cleared, its attribution was no longer in doubt, and sherd-counting was consequently considered superfluous. With the excavation of Temple VIII in the second season, however, the first admixture appeared among the pottery of new and hitherto unfamiliar wares; so that it was considered advisable to resume the process of numerical assessment. Actually, the hiatus thus created in the chart is of no great importance, since the disparity between the pottery of Temples VI and VII was almost negligible.

For purposes, then, of any general classification, the Al'Ubaid period proper may be said to begin after the disappearance of the last archaic temple, which corresponds to Level XIV. It ends with Temple VI, and there is reason to suppose that the cemetery should also be associated with its final stages. Yet, although the pottery of Levels VI to XIII has thus tended to be assembled under a single designation, its own grouping, as illustrated in our chart, points clearly to the division of the period into two sub-phases. The obvious line of demarcation occurs between Levels VII and VIII, where it corresponds to a major change in the shape and general

character of the vessels in most common use. Once its significance is accepted, it is easy to recognise a late sub-phase, represented by the cemetery and Levels VI-VIII, in which all the conventional characteristics of the Al'Ubaid culture in South Iraq are found side-by-side, preceded, in Levels VIII to XIII by less familiar conditions, where 'Ubaid elements in shape and pattern are out-numbered by extraneous features, not hitherto associated with them. In these circumstances, it may here be well, first to take the pottery of the earlier 'Ubaid sub-phase, and examine more closely both its characteristic and its exotic elements.

Typical Al'Ubaid painted ornament, then, first appears on simple bowl-shapes (Types 6 & 7) and necked jars (Type 12), where it takes the form, for the most part, of swags, meanders or zigzags composing a running ornament between plain horizontal bands, beneath the rim or around the shoulder. More individual shapes, such as lugged or spouted jars and basket-handles (Types 9, 2 & 3) also occur in smaller numbers towards the end of the phase. The ware is at this stage characterised by a buff or pinkish clay, decorated with black or chocolate paint over a cream-coloured or whitish slip. The greenish overbaked clay and jet-black paint which used to be considered a criterion of 'Ubaid ware, was on the whole extremely rare. Added to this, the preponderance and strongly individual character of the intrusive or unfamiliar elements which run parallel, suggest that one is dealing with a phase of prehistory, into which no sounding at any site in southern Iraq has ever before penetrated. Most prominent among the latter are thin bowls or cups, which, judging by the quantities in which they were found, must have served some votive or ritual purpose. The bowls are about 20-25 cms. in

diameter, with gently everted rim and round bottom. The clay is light greyish or greenish in colour, apparently wet-smoothed or covered with a fine slip, and decorated with vivid black or terracotta-red paint. The walls of the vessel are extremely thin and baked to a "clinking" hardness. The pattern is usually confined to parallel bands outside the rim, with variously shaped "blobs" of paint in isolated groups between them. The centre of the curved bottom is sometimes marked by a plain circle. The earliest examples occur in Levels XV and XIV, where the vast majority of other pot-types are classifiable as pre-'Ubaid. From then onwards, they are found in increasingly large numbers, reaching a maximum frequency in Level X. In Level XI, the bowl is superseded in popularity by a much smaller and finer cup, with extraordinarily intricate and tasteful decoration.

These little vessels, which measure from 10 to 15 cms. in diameter, are even finer and more fragile than the bowls. The clay is buff or brown in colour, with a somewhat lighter slip, and decorated with brown or dark gray paint. The designs, which are too elaborate for a description to serve any useful purpose, cover the whole of the outer surface. Inside, the ornament is usually confined to a single broad sweep of paint, curving across one side of the vessel from rim to rim. The whole treatment has a totally exotic character, more reminiscent of contemporary ceramic ornament in western Iran than of any Mesopotamian decoration. These cups in particular seemed likely to have had some ritual function. They were found exclusively in the temple, and groups of them were sometimes nested one inside the other.

The second most unexpected, though not in fact unfamiliar feature of the early-'Ubaid sub-phase, is a large, flat, hole-mouthed vessel, with a long spout projecting diagonally from the shoulder (Type 15). Two complete examples of this type were found, one of them actually unbroken. There were also several complete bodies and spouts, in addition to the thirty odd fragments which were distributed throughout the six levels in question (Fig. 73). Except for the spout itself, which required to be fairly substantially made for purposes of rigidity, the walls of the vessel are abnormally thin and fragile. The clay is pinkish or greenish, with a slip, and the paint purplish brown or chocolate. The entire vessel, including the spout, is usually covered with solid colour save for some simple reserved design on the body, such

as parallel lines, whose secondary cross-hatching leaves rows of tiny reserved squares (Level VIII, Fig. 82, No. 9). It will be appreciated that, with their strange shape, purplish paint and reserved designs, these vessels have an extremely individual character. In fact, with the exception of a single fragment, which appeared to have been unintentionally overbaked, they seem to have no connection whatever with the normal 'Ubaid wares of south Iraq. An exact parallel is not, however far to seek, for a number of almost identical vessels were found in Levels XIX-XVII at Tepe Gawra. One of these, which has been published⁴¹ and is now in the Iraq Museum (IM. 42232) is again ornamented with purple-red paint on a reddishbuff slip. Another, which reached the University Museum, is said to have dark brown paint on a light gray ground, like several fragments found at Eridu. Here, then, for dating purposes, is a parallel between the early 'Ubaid phase at Eridu, and the deepest 'Ubaid levels at Gawra; and it is significant that in Gawra XVII also occurs one of the earliest temples. As to the purpose of the vessel, an indication of some ritual function was again provided by the discovery of our own intact example, in a niche behind the altar of Temple VIII, filled with the fish-bones which are found in such profusion elsewhere, and are taken to be the remains of votive offerings.

Development by Levels

Level XIII

Sherds which justify the association of this level with the Al-'Ubaid period (Fig. 89) are mostly the rims of simple bowls, with decoration inside or outside in the form of horizontal bands, swags and meanders. They are subdivided for convenience into "round rims" (Type 7, Nos. 1, 3, 9 & 14) and "square rims" (Type 6, Nos. 2, 4 & 7). There is one example of the hole-mouthed jar with pierced rim (Type 23), whose early origin has already been referred to, bearing typical 'Ubaid ornament (No. 5), and another (No. 6) with a group of wavy lines which might represent snakes. There is also one sherd of a typical 'Ubaid lugged jar (not illustrated). At the same time, the "tortoise vessel" is already represented by five sherds, and there are a variety of thin votive bowls (Type 20, Nos. 10, 13, 15 & 18) with characteristic group-ornament between horizontal bands. Finally there is a good number of Hajj

⁴¹ Speiser, Smithsonian report, 1939, Plate 4- (1); Tobler, *Excavations at Tepe Gawra* vol. 2, p. 136, plates LXXIIb, LXXVd and e.

and CXXIII. 113. Sherds from similar vessels are shown in plates LXIXb, 24, LXXIVa, 13, and LXXIVb. 13.

Mohammed and pre-'Ubaid survivals (Nos. 16, 17, & 19-24).

Level XII

Notable in this level is a large sherd (No. 2) of a hole-mouthed jar with pierced rim, having again an unmistakable 'Ubaid form of ornament (Fig. 88). There are also typical 'Ubaid necked jars (Nos. 4 & 8). Nos. 19 & 25 are surviving pre-'Ubaid sherds, with the characteristic secondary pattern scratched through the primary paint. No. 25 belongs to some sort of chalice-shape, whose exact character we were never able to determine exactly.

Level XI

Here there is an increased repertoire of 'Ubaid motifs (Fig. 87), particularly on necked jars (Nos. 5 & 6), and several early-'Ubaid shapes appear for the first time (Types 10, 16, 21 & 22). A large sherd of a typical "tortoise vessel" is illustrated (No. 13) and another bearing a representation of an animal (No. 11) almost the only example found at Eridu. Surviving fragments of pre-'Ubaid ware are sufficiently small and infrequent to warrant the assumption that the ware has ceased to be manufactured or used.

Level X

Fine, bold 'Ubaid designs (Fig. 86) are now found on lugged jars (Type 9, No. 17) and there is an almost complete example of the narrow necked jar, which first made its appearance in the previous level (Type 22, No. 24). Thin votive bowls are now at the height of their popularity, and are represented by approximately three hundred sherds. There are two examples of bowl-bottoms with circular ornament (Nos. 14 & 15). Jars with vertical necks rising in a gradual curve from the shoulder (Type 18) appear for the first time.

Level IX

Thin votive bowls (Type 20) now share their popularity with much finer and smaller cups (Type 19). Each type is represented by about seventy sherds, but of the latter there are now three complete examples, exquisitely painted with the most delicate ornament (Fig. 84 Nos. 1, 3 & 4). Another new type, arriving simultaneously with these cups is a rather coarse bowl with a rim flattened diagonally inside (Type 17, Fig. 84,

No. 23, 26). The importance of this type lies in the fact that it is shown, by similarity of pattern, technique and frequency of occurrence to be the early-'Ubaid predecessor of the carinated dish with flared rim (Type 5) which is so very characteristic of the mature 'Ubaid ware in the cemetery and late temples. H.M. fragments in this level (Fig. 85), Nos. 3, 6, etc.), are sufficiently plentiful and large in size, to prove that the ware was still in use, and there is one most interesting survival from the pre-'Ubaid period. This is a tall beaker (Fig. 84, No. 15), crudely made and with somewhat equivocal ornament, but still recognisable as a late imitation of the fine vessels (Type 32) manufactured in pre-'Ubaid times.

Level VIII

Here are some of the best examples of the highly ornamented thin cups, which have now almost entirely superseded the corresponding votive bowls (Fig. 83, Nos. 1, 2 & 3), and rim-sherds of such cups, which have reached almost bowl dimensions (Nos. 7, 11, 13 & 14). The intact example of the "tortoise vessel" is illustrated, and a fine rim-sherd of a lugged jar (Fig. 83, No. 16). For the rest, the typical early-'Ubaid pottery appears in almost all its forms, side-by-side with earlier survivals. Amongst the latter is another sherd with secondary scratched ornament (Fig. 83, No. 4) and another chalice-sherd with ornament on the upper surface. For the last time, H.M. wares are shown to be still in use (Fig. 83, No. 14, etc.).

The Late 'Ubaid Phase

Apart from clay vessels of obviously ritual purpose, such as the painted censers (Nos. 13 & 15) and the "snake" bowl (No. 14), all the 'Ubaid types found in Temples VI and VII and illustrated in Fig. 74 also appear among the cemetery pottery. The latter may accordingly be taken as a group to represent the latest phase of the 'Ubaid period encountered at Eridu. Since, from the burials excavated in the second season, we recovered nearly two hundred complete pots, quite a high proportion of which were intact, a very complete study may here be made of the contemporary repertoire of shapes and patterns⁴². They are found, as a result, to correspond in almost every detail to ceramic assemblages already recorded from other sites in south Iraq.

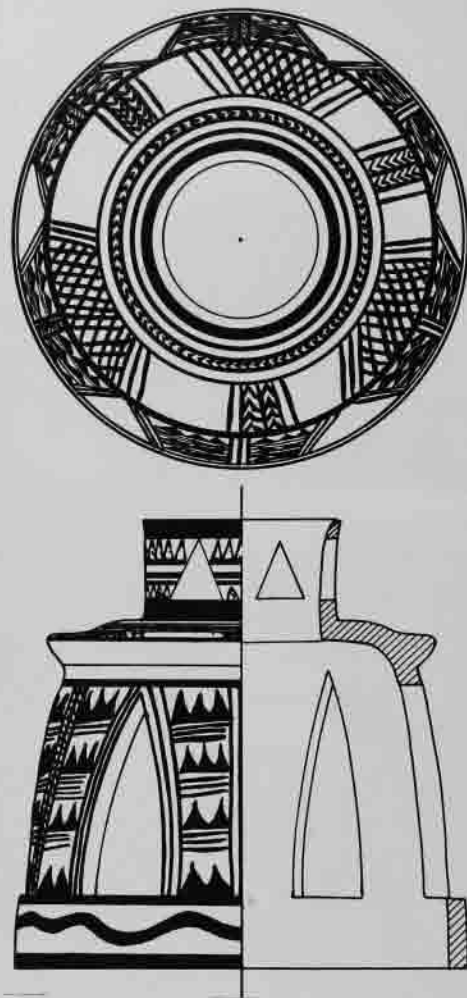
42. In the case of the cemetery, the figures in our chart (Fig. 72) are particularly reliable, since they represent whole vessels rather than single sherds.



FIG. 73

The clay varies from pink to buff or greenish colour, with a cream or greenish slip and black, chocolate or dark brown paint. Once more there are fixed combinations. Pink clay gets with a warm pinkish cream slip and dark brown paint, a greenish clay and slip with black paint, and green, overbaked ware is ornamented in jet-black. As in the case of the pre-Ubaid wares, this leads one to

suppose that the varying temperature at which the vessels were baked has something to do with the variety of colouring. Clearly exceptional is a warm chocolate paint, used over a cream slip on buff clay, giving a rich effect which is not recorded in Ubaid assemblages from elsewhere. Another characteristic which distinguishes this pottery from that found at the type-site, is the low

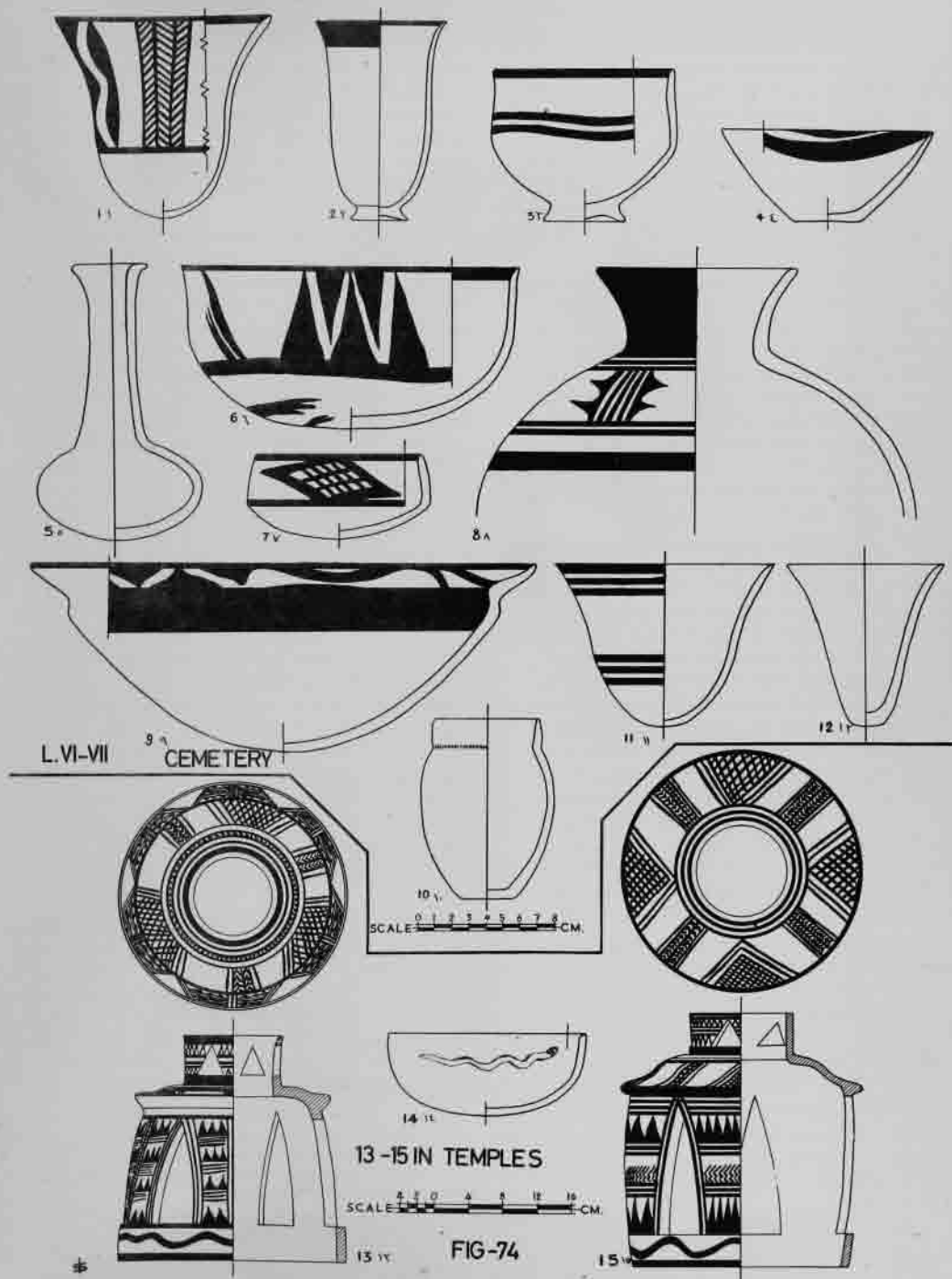


proportion of green, over-baked vessels with jet-black paint, a circumstance which we had also previously observed in the 'Ubaid settlement at Tell 'Uqair⁴³. In the comparatively rare instances where such vessels occurred at Eridu, they were usually warped or deformed, as though the over-baking had been unintentional. As elsewhere, the pottery generally was almost invariably

hand-made, and examples where the use of a **tournette** could be detected were infrequent.

The most common type of all in the cemetery, is a shallow bowl, having an everted and flattened rim with a hollow beneath it, which creates a slight carination (Type 5). In rare cases it is provided with a ring-base. It has a

43. Cf. *J. N. E. S.*, vol. 2, no. 2, footnote on p. 150.



border, usually of intermittent ornament inside the rim, and the central ground is left blank (Fig. 75, Nos. 2-9). Variations on this shape are simple bowls with square (Type 6), or round (Type 7), rims (Fig. 76, Nos. 2-6). These often have fine, bold decoration in the central ground. There is a curious variant of Type 6 (Fig. 76, No. 5) which has a partition forming a separate compartment on one side. Dishes decorated with other variety of designs could be seen in Fig. 77.

Also common in the cemetery are painted cups with round bottoms and everted rims (Type 1, Fig. 78, Nos. 9, 12, 13, 15, etc.). A variant on this shape is a beautifully ornamented vessel (No. 10), with a single handle and ring-base. Cups with a taller proportion, and occasionally furnished with a ringbase (Type 11) are extremely common in the cemetery, where they were doubtless used for libations or some other votive purpose (Fig. 74, No. 2. Compare Fig. 78, No. 11). Cups with ringbases and slightly inverted rim are also very characteristic (Fig. 78, No. 1-8 & Fig. 74, No. 3).

Most of the remaining outstanding shapes occur also in our schedule of conventional 'Ubaid types, found in the 'Ubaid settlement at Tell 'Uqair⁴⁴). There is the jar with slightly everted neck and a round spout projecting from the shoulder ('Uqair Type 4. Our Type 2, Fig. 79, No. 5); a similar spouted jar with an almost vertical neck and a "basket" handle ('Uqair Type 9. Our Type 3, Fig. 79, No. 7). The jar with a short, vertical or slightly everted neck and four pierced lugs on the shoulders ('Uqair Type 3. Our Type 9, Fig. 79, No. 3, Fig. 80, No. 9)⁴⁵). On the other hand a unique type, of which one example only was found in the cemetery and a great many in Temple VI, was an unpainted bottle with a globular body and tall, slightly trumpet-shaped neck (Type 14, Fig. 74, No. 5). Another unpainted group found in both cemetery and temple VI was an undistinguished little jar, with a vertical, or slightly everted neck (Type 1, Fig. 79, Nos. 6 & 9).

From the cemetery also are several unique shapes which do not appear in our schedule of types, since they are represented by only a single vessel. These include (Fig. 79, No. 4) a spouted jar, with a single handle from neck to shoulder (Fig. 80, No. 2) a carinated bowl with its rim intentionally bent into a trefoil shape; (Fig. 80, No. 5) a hole-mouthed jar with a wide round spout on the

shoulder; (Fig. 80, No. 11) an attractively decorated little jar with vertical neck and two handles from neck to shoulder; (Fig. 80, No. 13) a small jar with neck bent into a lip-spout; (Fig. 80, No. 7) and a necked jar with a ringbase. Infant burials in the cemetery were often furnished with miniature bowls, jars or cups (Fig. 76, No. 8 & Fig. 78, No. 14).

Possibly the most striking vessels of the late 'Ubaid period, were the painted "censers", of which fragments were found in the double chamber, No. 28, of Temple VI. There were fragments of at least three examples of various sizes, from which we were able to reconstruct two complete ones. (Fig. 74, Nos. 13 & 15). Vessels such as these, whose ritual function is obvious, have frequently been found, in one form or another, in temples of later periods, and we assume, from their designation as "censers", that they are considered to have supported a smaller vessel filled with incense⁴⁶). These objects are in all periods provided with some sort of pierced "window" openings, and other indications have also been found to suggest that they are intended to represent miniature buildings (Fig. 81). In the examples under discussion, the character of the painted design, combined with the triangular shape of the openings, could easily be taken to reflect an early memory of reed construction.

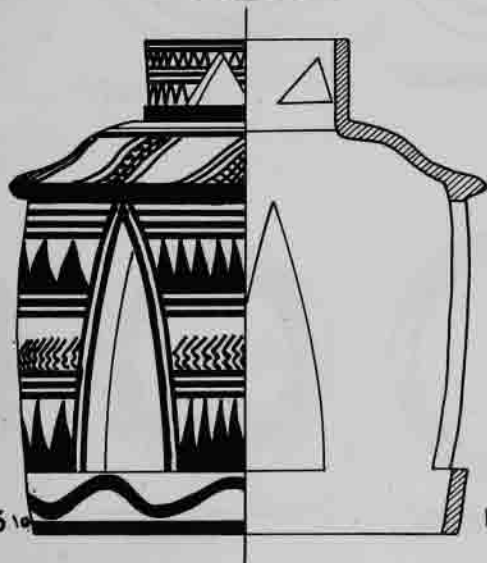
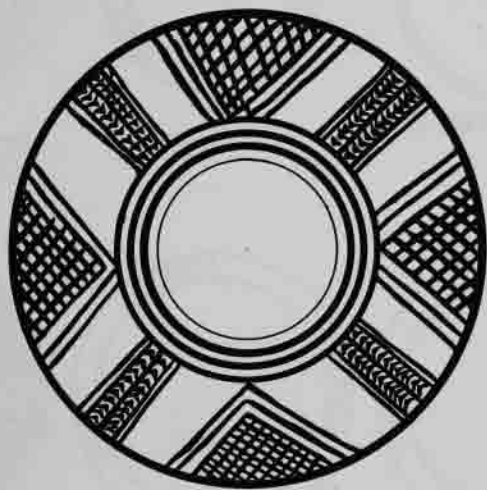
One other pottery vessel, which may also be taken to emphasise the continuity of ritual practices in Mesopotamian shrines, is the simple bowl (Fig. 74, No. 14) ornamented with three snakes in relief. This may surely be considered as foreshadowing the snake-shrines and snake ornamented vessels of later times. It may perhaps also be associated with the two fragments of terra-cotta snakes found in earlier temples at Eridu, and discussed elsewhere (Chapter 6 Section B).

Finally, it should perhaps be emphasised here that, apart from the fragmentary remains of the painted "censers", the pottery generally in Temple VI showed some symptoms of having a deteriorating character. The proportion of painted sherds to unpainted was not high (75:579), while such painted ornament as was found, tended to be clumsy. This might, in fact, be taken to suggest the decline in craftsmanship at the end of a cultural epoch.

44. J. N. E. S. vol. 2, no. 2, Plâche XVII.

45. A magnificent example of such a vessel (Fig. 78 No. 16) came from a sounding (No. 8 in square H) outside the area of the 'Ubaid settlement.

46. Apart from numerous examples in the Early Dynastic period (see for example those found in the Square Temple at Tell Asmar. O. I. C., No. 19 p. 18 and fig. 16), a painted example of the Human period has been published (B. A. S. O. R. No. 45, Fig. 3).



1510

FIG. 74

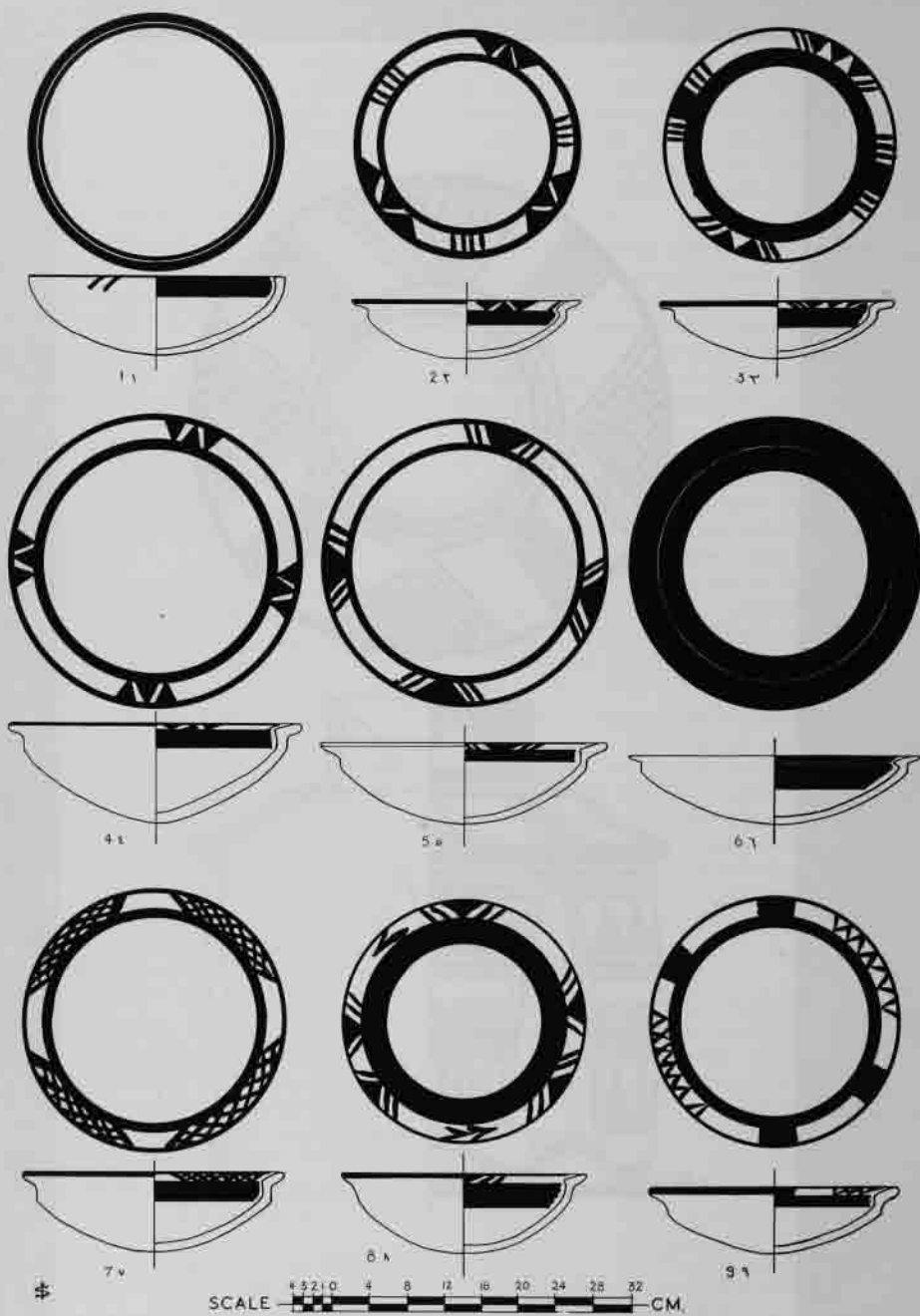
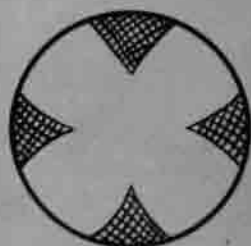
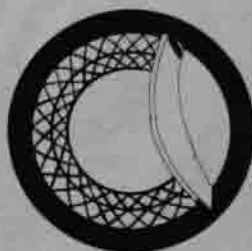
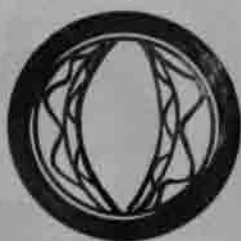


FIG-75



4

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FIG. 76

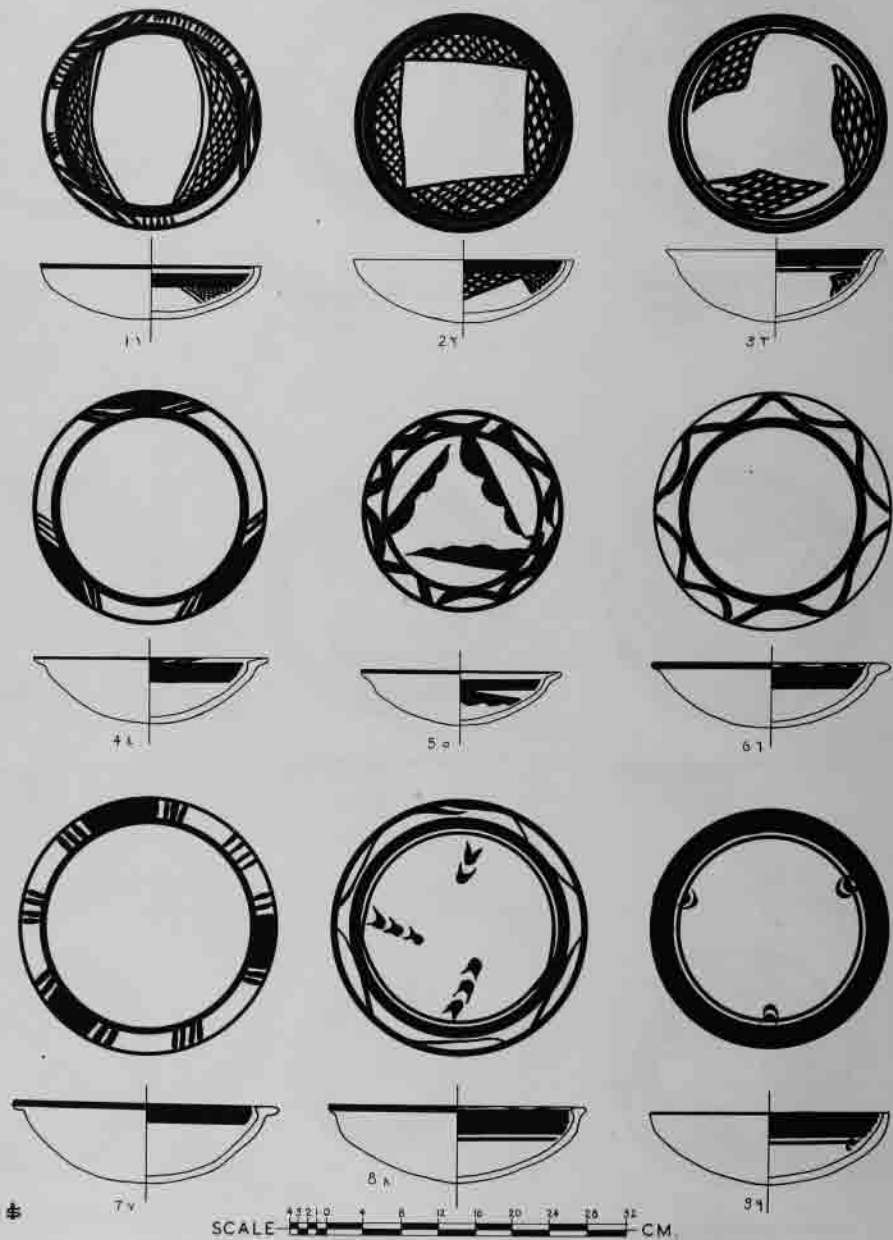
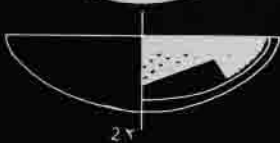
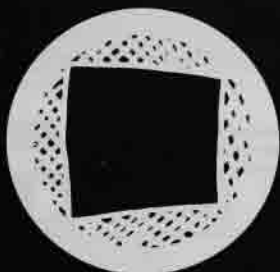


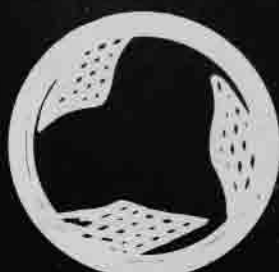
FIG-77



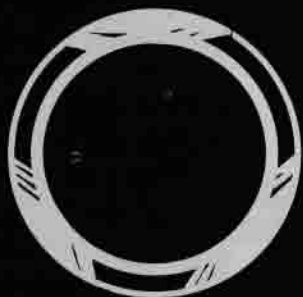
1A



2A



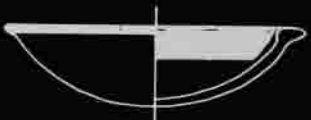
3A



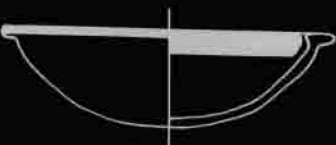
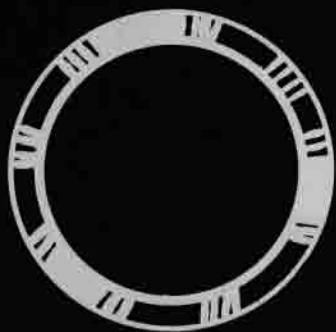
4A



5A



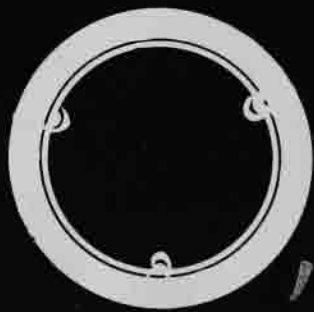
6A



7A

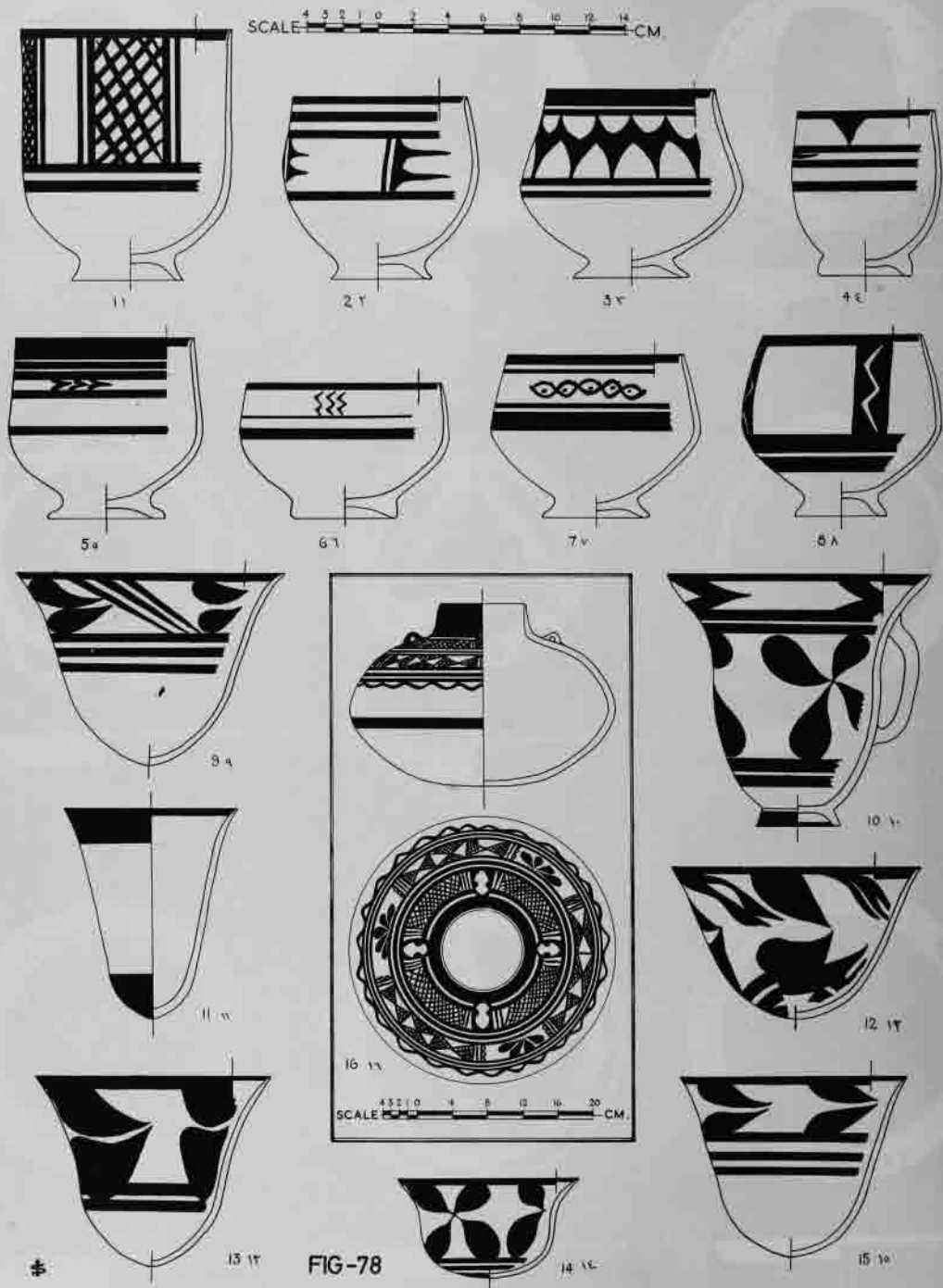


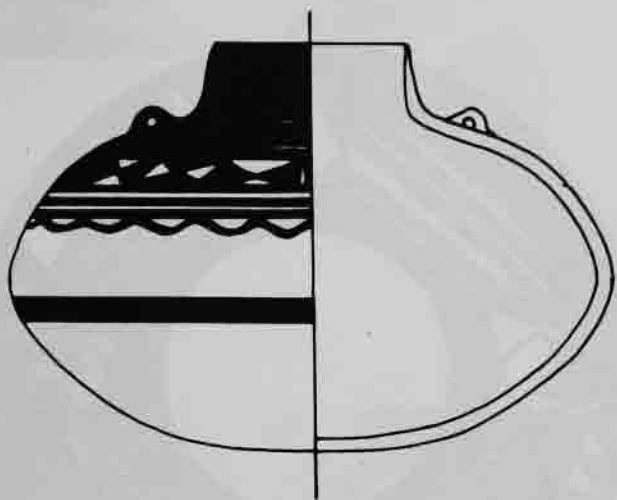
8A



9A

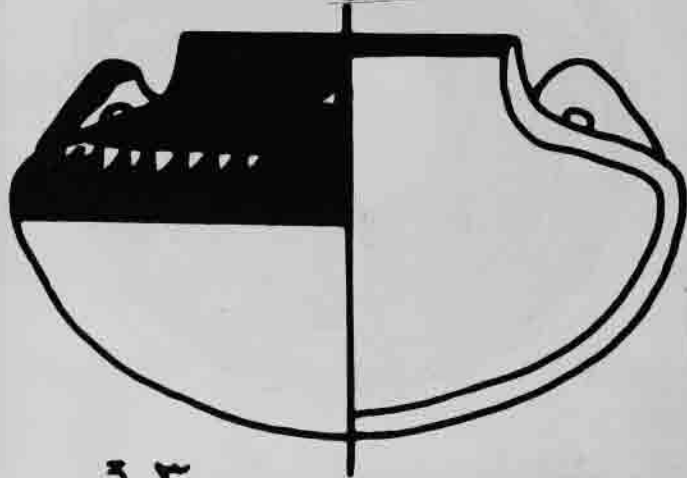
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16 17

SCALE  CM.



3 7

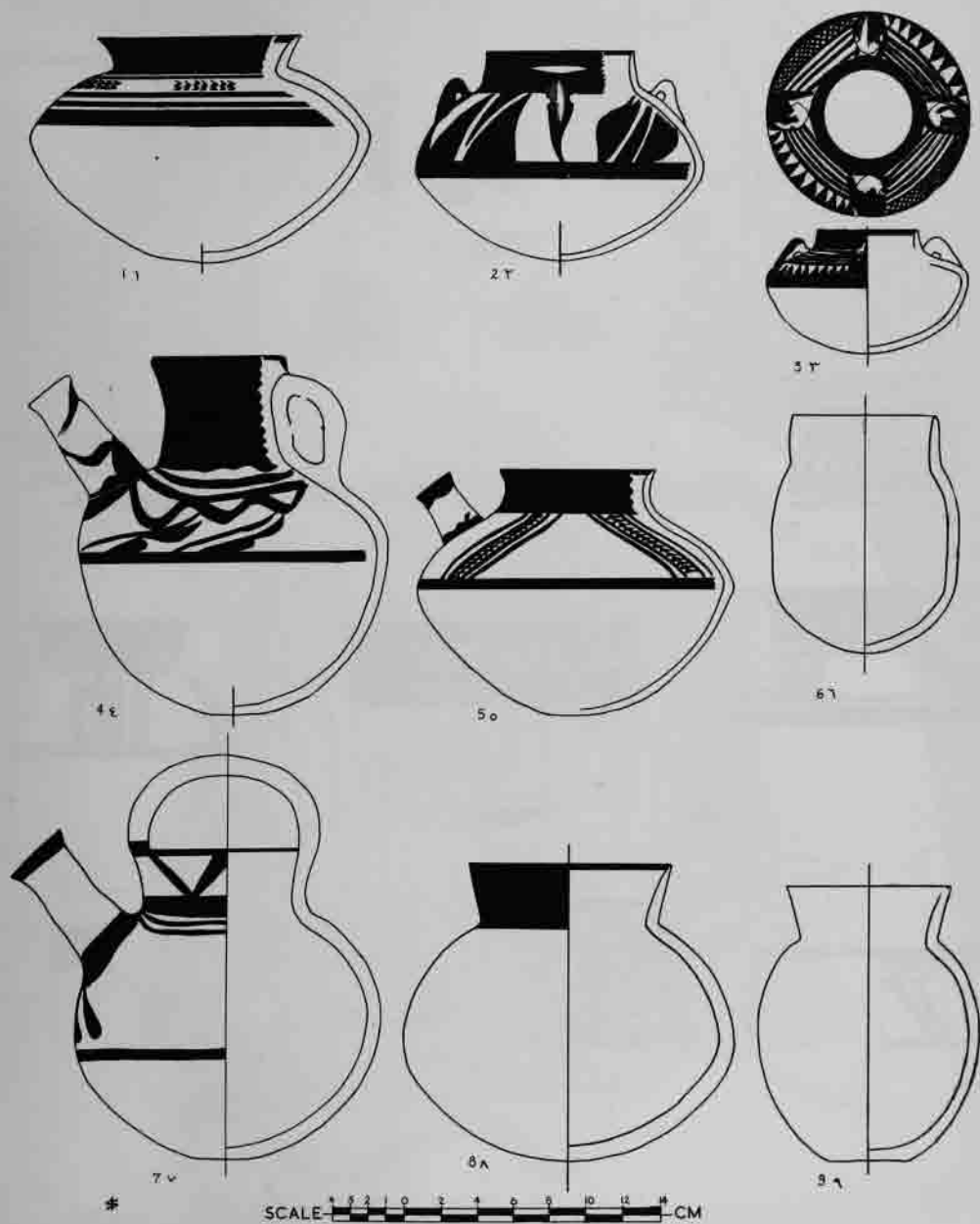


FIG-79

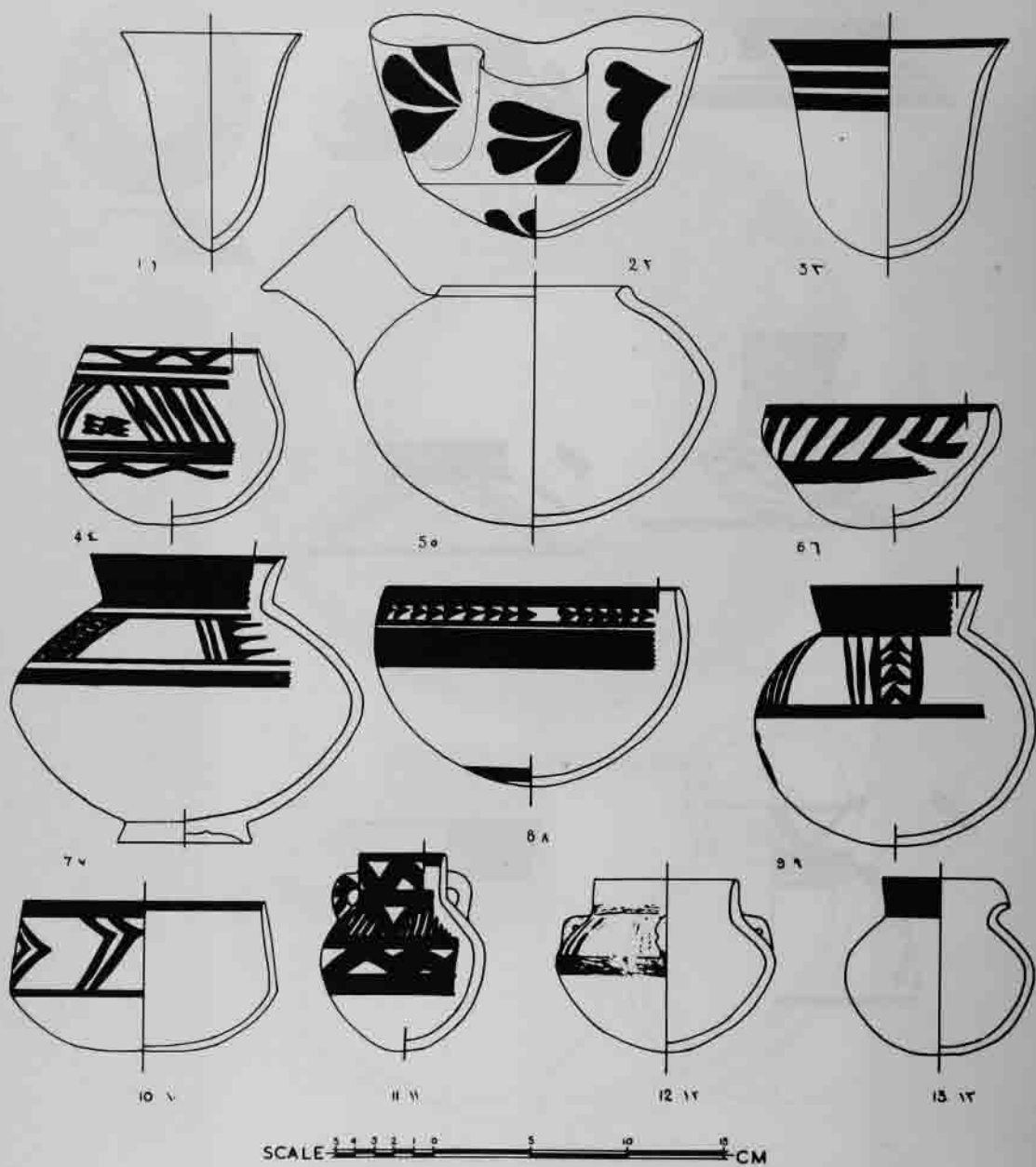


FIG. 80

FIG 81 



C. Pre — Al-Ubaid ware (Eridu Ware)

The distribution of pottery types, according to levels, as illustrated in our diagram (Fig. 72), makes it extremely clear that the new, pre-'Ubaid painted ware corresponds to a well-defined epoch in the history of the prehistoric temple, namely that from the first occupation at Level XIX, to the sand-filling above the remains of temple XIV. It is thus to be associated with the archaic building-remains of Levels XVIII to XIV. The fact that, out of ten types tabulated, seven are already present in Level XIX, suggests that the ware arrives fully developed with the first settlers. After the appearance of true 'Ubaid types in Level XIII, the sudden decrease in the size and number of the surviving sherds, shows that it has ceased to be a local manufacture.

Actually, the term "new" can hardly be applied legitimately to the ware under discussion. It has, in the past, been found and recorded, at least in the form of sherds surviving into a later period, both at Al'Ubaid⁴⁷ itself and in the "Flood Excavation" at Ur⁴⁸. Yet Eridu is undoubtedly the first site in southern Iraq, where a sounding has penetrated to occupational levels at which this pottery was actually in the process of manufacture. Its character is extremely individual. The first direction in which one would naturally look for a parallel, would be to the contemporary Pre-'Ubaid wares of northern Iraq. But here, though superficial resemblances in the typology, both of the Tell Halaf and of the Samarra wares, may immediately strike one, a closer examination will show that these depend upon generalisations incapable of more detailed precision.

Technique:

The clay varies in quality from fine to extremely fine. There are no large grits visible, and the requirements of tempering are evidently met by the use of sand, a material of which there can seldom have been any lack at Eridu. The body-clay is almost invariably covered inside and out with a slip, composed of the same clay, or of a lighter coloured substance, giving a smooth, creamy, whitish or greenish finish. The paint varies in colour from jet-black, black fading to brown, dark brown, to dark red, and is normally laid on extremely thick. There is something in its composition which produces a glossy effect after firing at the points where it is laid on thickest. Apart from this occasional phenomenon, the paint itself is strictly matt. There appear, on careful examination, to be certain fixed combinations of colouring, in clay, slip and paint. For instance, a pink body-clay seems usually to go with a warm, pinkish-cream slip and red or dark red paint; buff clay is usually covered with cream or whitish slip and ornamented with dark brown to black paint; while hard-baked, greenish clay is more often covered with a similar, greenish slip and jet-black paint. The constant factors in this system lead one to wonder whether the somewhat wide variations in the colour and appearance of the ware, are not, in fact, largely due to the varying temperatures at which the different vessels were fired.

Almost our first detailed examination of the sherds, showed us that a good many of the vessels to which they

47. Hall and Woolley, *Ur Excavations I. Al'Ubaid*, Plate XVIII. Nos. 1600, 2030, 1905, 2279, 1567, 1603, 1601, etc. are examples.

48. Woolley, *Development of Sumerian Art*, Plate 2b. About half of these sherds are easily recognisable pre-'Ubaid types. They are described as "Al'Ubaid I" - that is, from the stratum beneath the flood

deposit. Plate 2a, on the same page, however, shows a number of whole pots of the characteristic Eridu cemetery type, which are also described as "Al'Ubaid I". This seems to show that all three of Woolley's categories (Al'Ubaid I-III) correspond to the Eridu cemetery period or later, and that the pre-'Ubaid sherds in Plate 2b are survivals.

belonged had been oval in shape, rather than round. Such vessels would, of course have been hand-made, in the fullest sense, and a certain proportion of the circular types also showed obvious signs of having been made without the use of a wheel. Yet many of the finer vessels were more cleanly shaped than could have been achieved by so primitive a method, and, in fact, suggested the use of some sort of 'tournette'

Shapes

One of the most characteristic shapes is a broad, flat dish or plate, circular or oval (Type 33a) and occasionally provided with a ring-base (Type 33b & c). A variant of this class is a somewhat deeper dish or bowl, with the rim turned up, and sometimes inwards, creating a slight carination in the outer face (Type 27). More ordinary uncarinated bowls (Type 26b & d), sometimes with their rims slightly everted (Type 26c) or inverted (Type 26e), are also extremely common. A much deeper bowl (Type 25) has a base laid to a very flat curve, and slightly ogee sides, sometimes terminating in a molded rim (Types 25b & c). Also very common are jars with short or long vertical necks and flat or rounded bases (Type 30). Others have flared necks rising from a curve (Type 29a) or from an angle (Type 29b). A widemouthed jar, with vertical or everted rim is somewhat less frequent (Type 28), and there were four examples only of a holemouthed jar with a molded rim (Type 31). One of the finest and most unusual shapes was a tall goblet, with ogee sides (Type 32a) and occasionally a carination near the flat bottom (Type 32b). These vessels were invariably of fine clay and extremely thin. Finally there was some sort of pouring-vessel, with a lip-spout, which appeared sometimes to have had a molded rim, and often to have been oval in shape. Unfortunately no complete example of such a vessel was found.

Composed of a much coarser, straw-tempered clay, cooking-pots of undistinguished shapes must have been used in fairly large numbers, and fragments were found of a curious, flat-bottomed clay vessel, cross-scored on its upper face with deep channels, which it was tempting to connect with the so-called 'husking — trays', discovered by ourselves at Tell Hassuna⁴⁹.

Ornament

The painted designs on the pre-Ubaid pottery are elaborate, sophisticated and widely varied, but each type of vessel is distinguished by its own characteristic repertoire of patterns. Starting with the **shallow dishes**, with or without carination (Types 27 & 33), which may perhaps be considered the most typical, if not the most

common category, their shape lends itself to maximum decoration on the inner face. The design is then divided into two distinct elements, namely, a central ground and a border. The most normal form of border-ornament is a wide band, filled with double cross-hatching or diaper pattern, sometimes ingeniously elaborated by the intermittent solid-filling of the checks or diamonds thereby created. The extremely rich effect which is thus obtained may be considered a primary criterion of the ceramic under discussion. An occasional substitute for the diaper ornament, is an arrangement of diagonal stripes in alternating groups with solid triangles between. These primary motives are usually framed between two or more bands of running ornament, consisting of broad zig-zags meanders, opposed triangles or lozenges. There are two alternative treatments of the central ground, which covers the almost flat bottom of the vessel. One is an all-over ornament, consisting of diaper, checks, opposed triangles, etc. The other is a centrifugal design, such as has hitherto been considered characteristic of Samarra and contemporary Iranian wares⁵⁰. From a mere medallion in the centre of the dish, as it appears in the earliest levels, it develops into an elaborate design, covering the whole ground, usually with some sort of cross as a basis.

On the outer face of the vessel, the decoration extends only from the rim down to the carination or inward curve. It consists almost invariably of single broad chevrons, or opposed groups of diagonal stripes.

Simple bowls (Type 26) follow the same principle of decoration, but there is a variant in the earliest levels. Here the rim only is ornamented inside, with wide triangles of solid colour, whose downward points end in a variety of small 'tassels'. The corresponding motive for the outside of the rim is an opposed grouping of diagonal

49. J. N. E. S. vol. 4, no. 4, pp. 277-278, Fig. 3.8-10, and Plate XVIII, 1.

50. Frankfort, *Studies in the early pottery of the Near East* (London, 1925-27).

stripes between horizontal bands.

Tall-sided bowls naturally have no decoration on the under side of their almost flat bottoms, and the ornament on the sides is usually restricted to the outer face only. It usually alternates between two designs. One is a simple, large-scale crosshatching, over the whole surface; the other is a motive of greater interest, because it creates a link with the Qal'at Hajj Mohammed ware, of which it has hitherto been considered typical. It consists of successive registers of opposed horizontal stripes, creating a herring-bone effect, intermittently punctuated with solid diamonds. Much more rarely, other motives already referred to in connection with dishes and bowls, are used on the outer face of these vessels. For **jars** (Types 28, 29, 30, & 31) various forms of running ornament, between horizontal bands, are preferred, but are restricted to the rim and shoulder of the pot, rather in the later Al'Ubaid manner.

Tall goblets (Type 32) also have their own favorite forms of ornament, restricted to the outside only. Beneath the rim are horizontal bands of solid colour, often varied with neat rows of opposed triangles. Usually these are balanced by a single heavy band near the bottom (at the point of carination, if any), and the ground between is filled with some widely-spaced vertical motif. In one case it is entirely covered with tall diamonds, filled with parallel wavy lines.

There remains the **spouted pouring-vessel**, of which such fragmentary remains have so far been found, that it is hard to generalise about it. An intricate diaper, both inside and out seems to be one form of decoration.

Development by Levels

Level XIX (Virgin Soil) (Fig. 100).

All main types are already present, except Types 31, 33 & 34. Flat dishes are represented by a single carinated example (not illustrated). Plain bowls (Nos. 3, 7, 10, 11 & 12) are preponderant, with simple ornament, including tasselled triangles (No. 12). Necked jars (No. 4) and wide-mouthed jars (Nos. 1, 2 & 13) also appear. There are 39 fragments of coarse, straw-tempered cooking-pots and several pieces of husking-trays.

Level XVIII (Fig. 99)

Many items in the pattern-repertoire appear for the first time. The first flat dishes (No. 20) occur, with occasional carinated examples, but in these early levels the latter are in the minority. Ground ornaments for dishes

are central medallions, of which a variety are illustrated (Nos. 5, 8, 12, & 14). Bowls continue to be popular, and there is the rim of a fine, large example, with a solid triangle of colour inside, balanced outside by a bold variety of diagonal motives (No. 1). There are also tasselled triangles (No. 16) in considerable numbers. Cooking-pots are present, and the first examples of the large, oblong beads of baked clay, which appear to be characteristic of the period.

Level XVII. (Figs. 97 & 98)

Elaborate diaper patterns are now fully developed on dishes and bowls, but carinated dishes are still rare. Alternative designs inside the rims of bowls are still tasselled triangles, of which a great variety appear (Fig. 97, Nos. 8, 9, 11 & 13). The first, almost complete, oval dish has a bold, six-compartment design in red paint on a pinkish slip (Fig. 97, No. 6), while the circular dishes the central medallion is giving way to the all-over ground-ornament (Fig. 107 Nos. 15 & 18). There is the first example of H.M. ornament on a tall-sided bowl (Fig. 98, No. 34) and many new designs on a wide variety of jars. Tall goblets are for the first time represented by one complete rim (Fig. 98, No. 10).

Level XVI (Figs. 94, 95 & 96).

This is perhaps the peak-period of the pre-'Ubaid culture, and amongst the pottery, practically every shape and pattern is represented. Only the common bowls, ornamented with tasselled triangles no longer appear, and the grounds of dishes have ceased to be decorated with central medallions. For the latter purpose, all-over or centrifugal patterns are now preferred, as may be seen in the fine, almost complete example, with a ring-base (Fig. 94, No. 4) and other smaller fragments (94 Nos. 2 & 5, Fig. 96, Nos. 11, 12, 13, 15). There is now some variety in the decoration of tall-sided bowls. There are still examples of the two conventional forms of decoration (Fig. 95, Nos. 1 & 3), but varied bands of elaborate running ornament are now also used (Fig. 95, Nos. 2 & 4), and much simpler designs, such as plain horizontal bands or a single meander (Fig. 95, No. 10) foreshadow the taste of the 'Ubaid period. Some new and attractive motives occur in the decoration of necked jars (Fig. 95, Nos. 11 & 14) and wide-mouthed jars (Fig. 95, Nos. 18, 19, 20, etc.). There is an example of a hole-mouthed jar with molded rim (Fig. 95, no. 15) which has a diaper pattern, arranged in radial panels. Two examples of tall goblets were

preserved intact (Fig. 96, Nos. 20 & 21), while several sherds show possible variations in the ornament of the same vessel (Fig. 96, Nos. 22, 24, 25, etc.). One sherd survives of a pouring-vessel, heavily painted, with

ornament on the flattened rim, as well as on the inner and outer faces (Fig. 95, No. 6). Previous observations, about the ware in general, are particularly applicable here. The technical craftsmanship is of a high standard, the decoration varied and sophisticated, while the amount of painted pottery, in proportion to plain, is very high indeed. Level XV. (Figs. 92 and upper half of 93)

There is very little to distinguish the pottery of this level, except for a notable increase in the number of tall-sided bowls. A sherd (Fig. 92, No. 16) with a tasselled triangle⁵¹ is probably a survival.

Level XIV. (Figs. 91 & 90)

This is the last level which can be classed as predominantly pre-'Ubaid. Almost all the characteristic types are still represented, and there are two, almost

complete examples of finely painted circular dishes, with centrifugal patterns. But new elements are creeping in. As will be seen later, H.M. designs are now firmly established, and, for the first time, typical H.M. shapes appear in considerable quantities. Furthermore, decorative motifs (Fig. 90, Nos. 7, 11, etc.) and shapes (Fig. 90, No. 21) belonging to the 'Ubaid period now make their debut.

Level XIII and upwards

Levels XIII and XII and produced only eighteen and twenty-five pre-Al'Ubaid sherds respectively, compared with some hundreds of the types classed as 'Ubaid. From Level XI upwards, such early sherds as were found, could obviously be considered as survivors.

D. Qal'at Haji Mohammed Ware

This very distinctive ware was first found by the German expedition to Warka in 1937, and took its name from the village on the banks of the Euphrates, where it was discovered. The small mound, representing a prehistoric settlement in which the ware was apparently almost exclusively in use, stands so near to the river, that a part of it has been eroded by the floods. Large quantities of the pottery lie scattered on the actual foreshore, and, in the face of the vertical bank, it is possible to recognise the remains of pottery-kilns, in which it had doubtless been made. A section was devoted to the discovery in the Warka report of that year⁽⁵¹⁾, and some fine colour-reproductions of the larger sherds were published. It was suspected at the time that this pottery was a precursor rather than a mere variant of the true Al'Ubaid ware. Again, it could not be considered to be entirely "new", as typical sherds had already been published from Al'Ubaid⁽⁵²⁾ and elsewhere.

Characteristic H.M. wares appeared in considerable quantities throughout the course of the temple-sounding at Eridu, and its distribution seemed to suggest that it created an important link between the pre-'Ubaid and 'Ubaid periods. There is a remarkable variety of shapes in the pottery recorded from the namesite, and the great majority of the sherds, which have found their way into the Iraq Museum, suggest mere variations on a

single type of vessel (our type 24). However, the forms of decoration used are so very distinctive, that one other particular class of vessel (Type 25) with which they were found exclusively associated at Eridu, has been bracketed in this category for the purposes of our chart (Fig. 72).

Technique

The H.M. pottery has a fairly wide range of technical variations, from a medium-baked clay, decorated in matt paint over a rather thick slip, to a green, almost vitrified clay with a wet-smoothed finish and black paint, reminiscent of the very latest Al'Ubaid wares. Variants which we believe do not occur at the name-site, are, first, paint of the type used in the pre-'Ubaid pottery, which turns glossy at the points where it is laid on heaviest, and secondly a few instances of paint with uniformly lustrous character.

At Eridu, also, the paint itself has a fairly wide colour-range, from black to dark brown, dark red, and a remarkably fresh purple or plum. But the green paint which is in evidence in the German colour-prints, is missing.

51. Noldeke, *Neunter vorläufiger Bericht über die von der Deutschen Forschungsgemeinschaft in Uruk-Warka unternommenen Ausgrabungen* (Berlin, 1938), Plates 35-40. See now C. Ziegler, *Die*

Keramik von der Qal'at des Haggi Mohammed (Berlin, 1953).

52. Hall and Woolley, *Ur Excavations I. Al'Ubaid*, Plate XVIII, No. 1606.

Shapes

By far the most popular shape is a rather shallow bowl, with its bottom laid to a very flat curve, and a curved rim, widely flared from the carination (Type 24). One other pre-Ubaid type on which H.M. ornament fairly frequently appears, is the tall-sided bowl (Type 25). Simple bowl-rims also appear at the type site (Type 26).

Ornament

At Eridu, by far the most common form of decoration for the carinated bowls, is a rim, covered inside with a double cross-hatching of stripes, much thicker than the spaces between them. This results in a large area of solid colour, broken only by a system of tiny reserved squares. The flatly-curved bottom of the dish is then either left blank, or painted in solid colour, with some very simple design reserved (e.g. Fig. 90, No. 3, Level XIV). There is an alternative and slightly more painstaking variant of the design, when the cross-hatching consists of thin reserved lines, broken by spots of colour at their intersections. Outside, the rim only is painted, the device preferred being either solid colour or crude chevrons.

The second most characteristic design, consists of alternating groups of diagonal lines between horizontal stripes, making a herring-bone arrangement, punctuated by diamonds of solid colour, or triangles left blank (Level XIV, Fig. 90, No. 6). This is used for the most part on tall-sided bowls (Type 25), as has already been mentioned in connection with this shape as it appears in the pre-Ubaid range. Another feature, whose appearance at the name site associates it with H.M., is a secondary pattern scratched through the paint of the primary design. (e.g. Level XII, F.g 83 No. 19 & Level VIII, Fig. 88 No. 4). See also Hall and Woolley, *Ur Excavations I. Al'Ubaid*, Plate XIX, No. 1916. McCown (*Comparative Stratigraphy of Early Iran*), (Chicago, 1914), No. 51 on pp. 40-41) quotes examples from Qal'at Hajj Mohammed (Noldeke, *U.V.B.* 9 (Berlin, 1938), pl. 40a), from Nuzi (Starr, *Excavations at Nuzi* vol. 2 (Cambridge, Mass., 1939), (Plate 46A) and occasionally in Iran (Mecquenem, *Memoires de la*

Mission Archeologique de Perse vol. 20 (Paris, 1938), Fig. 20.12 on p. 114, and Fig. 32.9 on p. 127).

Occurrences

The first occurrence of the H.M. variant, which we were able to observe, was in Level XVII, where the characteristic herring-bone pattern appeared on a tall-sided bowl (Fig. 98 No. 34). The same occurs again in Level XVI and in Level XV, and the first two examples appear of typical carinated dishes with flared rims and H.M. decoration (Fig. 95, Nos. 3 & 4). After this, it recurs in every level up to Level VIII, in sufficient quantities to suggest that it is still in the process of manufacture (e.g. Level XIV: 50 sherds. Level XII: 60 sherds. Level VIII: 21 sherds). At Level VII, owing to a combination of circumstances, no effective sherd-count was made, and by the time that Level VI is reached the H.M. sherds no longer occur.

Amongst the early ceramic of Eridu, one more individual type must here be referred to, since it proves an exception to nearly all our generalisations and fits correctly into no category so far mentioned. It is a hole-mouthed jar with a double-molded rim, whose inner lip has four round perforations, either for suspension or for attaching some sort of lid (Type 23). It apparently goes back to the very earliest times, since the first example appears in Level XVIII, and there are singletons in Levels XVI and XIV. In these early stages, the technique, including the colour of the paint, is in line with the normal pre-Ubaid usage, but the patterns used in the decoration (which usually consists of simple lines and running ornament around the mouth) is completely noncommittal. By Level XIII (Fig. 89, No. 5), it has developed a distinctively Al-Ubaid character, and so continues, appearing regularly, until Level VIII. It is accordingly the only genuinely Al-Ubaid type⁵³ which already occurs in the pre-Ubaid levels⁵⁴.

53. It is also recorded at Al'Ubaid itself. See Hall and Woolley, *Ur Excavations I. Al'Ubaid*, Plate XIX, No. 2168.

54. McCown (*Comparative Stratigraphy of Early Iran*) (Chicago, 1914), p. 40 and Fig. 13 Nos. 150 and 171) illustrates examples from Al'Ubaid and Bakun A, and says "this peculiar type of jar is found at Gawra in Kudish Saghir 16 (Starr, *Excavations at Nuzi* vol. 2, Plate 43 K) and at Al'Ubaid (Hall and Woolley, *Ur Excavations I. Al'Ubaid*, p. 46 and

pls. XVII No. 2024, and XIX No. 2168). In Iran outside Bakun A, III-IX (McCown, *Comparative Stratigraphy of Early Iran*, Fig. 13 No. 171), it is known from the Musyan area (Potter, *Corpus vasorum antiquorum* (France, Fasc. 1, Paris, 1923), I Cf. Pl. 1: 9-11) and Zuhab (Mecquenem, *Memoires de la Mission Archeologique en Iran* vol. 20, Fig. 32. 10 on p. 127).

E. Descriptions of Stratified Potsherds

The following is the description of potsherds discovered in the prehistoric temples, arranged according to the excavated levels. For the types in the descriptions, see the chart in figure 72.

The large fragments and complete vessels are also illustrated in photographs at the end of this section in figures 100 to 106, as representatives of the three categories: Ubaid, H.M. and pre-Ubaid.

Level VIII (Fig. 82)

1. Complete bowl in fine, hard, greenish clay. Own slip. Black paint. Type 19a.
2. Fragmentary bowl in fine, hard, buff clay. Own slip. Dark chocolate paint. Type 19b.
3. Complete bowl in fine, hard greenish clay. Own slip. Black paint. Type 19a.
4. Buff clay. Greenish slip. Black paint. Type 5.
5. Fine brown paint. Greenish slip. Brown paint. Type 19a.
6. Fine buff clay. Own slip. Chocolate paint. Type 19a.
- 7.
8. Fine, greenish clay. Own slip. Black paint. Type 15.
9. Greenish clay. Purple-brown paint. Type 15a.
10. Brown clay/slip. Dark brown paint. Type 10.
11. Buff clay. Cream slip. Dark brown paint. Type 19.
12. Brown clay/slip. Dark brown paint. Type 10.
13. Fine greenish clay/slip. Dark chocolate paint. Type 19.
14. Greenish clay/slip. Black paint. Type 19.
15. Pinkish clay. White slip. Chocolate paint. Type 7.
16. Fragment of a jar in buff clay/slip. Black paint. Pierced lugs. Type 9a.
17. Bottom of a dish in buff clay/slip. Black paint. Type 5.?
18. Buff clay/slip. Chocolate paint. Type 6 A
19. Fragment of a jar in greenish clay/slip. Black paint. Type 29.?
20. Pinkish clay/slip. Chocolate paint. Type 17.
21. Pink clay. Brown paint. Type 18.
22. Pinkish clay/slip. Black paint. Type 9c.
23. Pinkish clay. Brown slip. Chocolate paint. Type 17b.

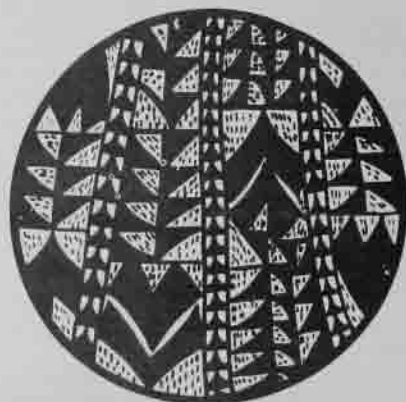
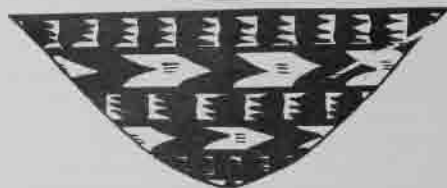
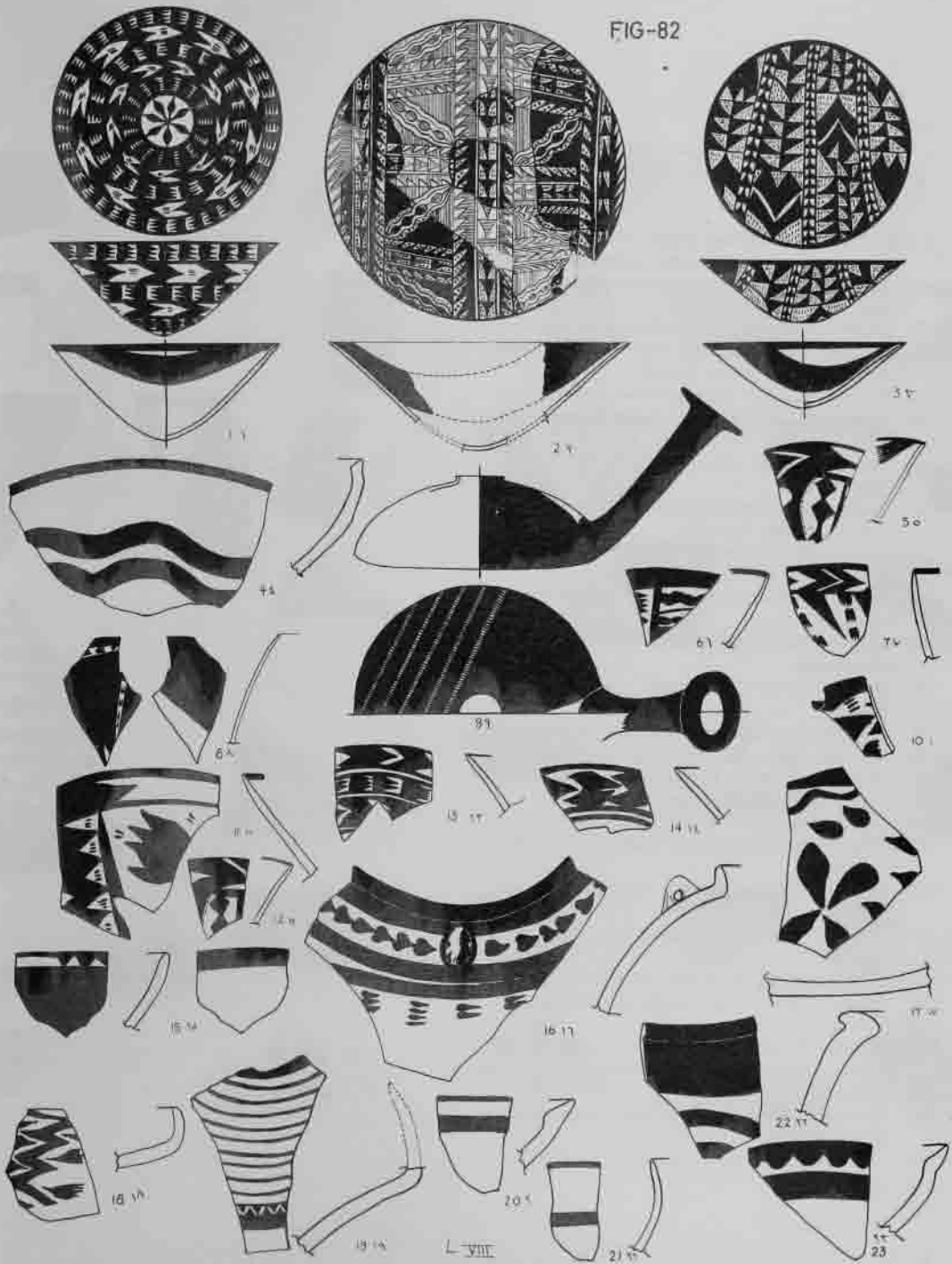


FIG-82



Level VIII (Fig. 83)

1. Bowl — rim, solid dark paint inside and a solid dark brown paint outside?
Type 26a
2. Bowl — rim, painted inside with dark black paint? and decorated with horizontal regular decoration marks like of the body colour.
Type 26 d.
3. Yellow clay. Whitish slip. Chocolate paint. Type 26a.
4. Buff clay. Cream slip. Dark chocolate paint. Pattern scratched through paint. Type 26.
5. Brown clay. Cream slip. Light brown paint. Type 7a.
6. Bowl-rim in gray-green, hard baked clay/slip. Black paint. Type 26b.
7. Dish-rim in buff clay. White slip. Black paint. Type 27.
8. Bowl-rim in greenish over-baked clay with gray core. Black paint. Type 26b.
9. Grayish clay. Cream slip. Black paint. Type 24.
10. Buff clay/slip. Black paint. Miniature.
11. Bottom of dish in greenish clay/slip. Black paint. Type 27.?
12. Brownish clay. Cream slip. Brown paint. Oval or boat-shaped.
13. Bowl-rim in brown clay/slip. Chocolate paint. Type 26.
14. Pink clay/slip. Purple-brown paint. Type 25.
15. Buff clay. Cream slip. Dark brown paint. Type 25.
16. Gray-green clay/slip. Glossy, black paint. Type 27.?
17. Buff clay. Cream slip. Brown paint. Type 25.
18. Buff clay/slip. Black paint. Type 27.
19. Pinkish clay. Cream clay. Reddish-brown paint. Type 6.
20. Bowl-rim in cream clay/slip. Dark, purplish paint. Type 26.
21. Sherd in greenish over-baked clay. Black paint. Type 27.
22. Pinkish clay/slip. Black paint. Some sort of chalice?
23. Sherd in pinkish clay. Cream slip. Brown paint. Type 26.
24. Bottom of dish in fine brown clay. Greenish slip outside. Wet-smoothed inside. Glossy black paint. Type 33a.?
25. Buff clay. Cream slip. Black paint. Basket-handle. Type 3.
26. Sherd in greenish clay/slip. Black paint. Type 25.

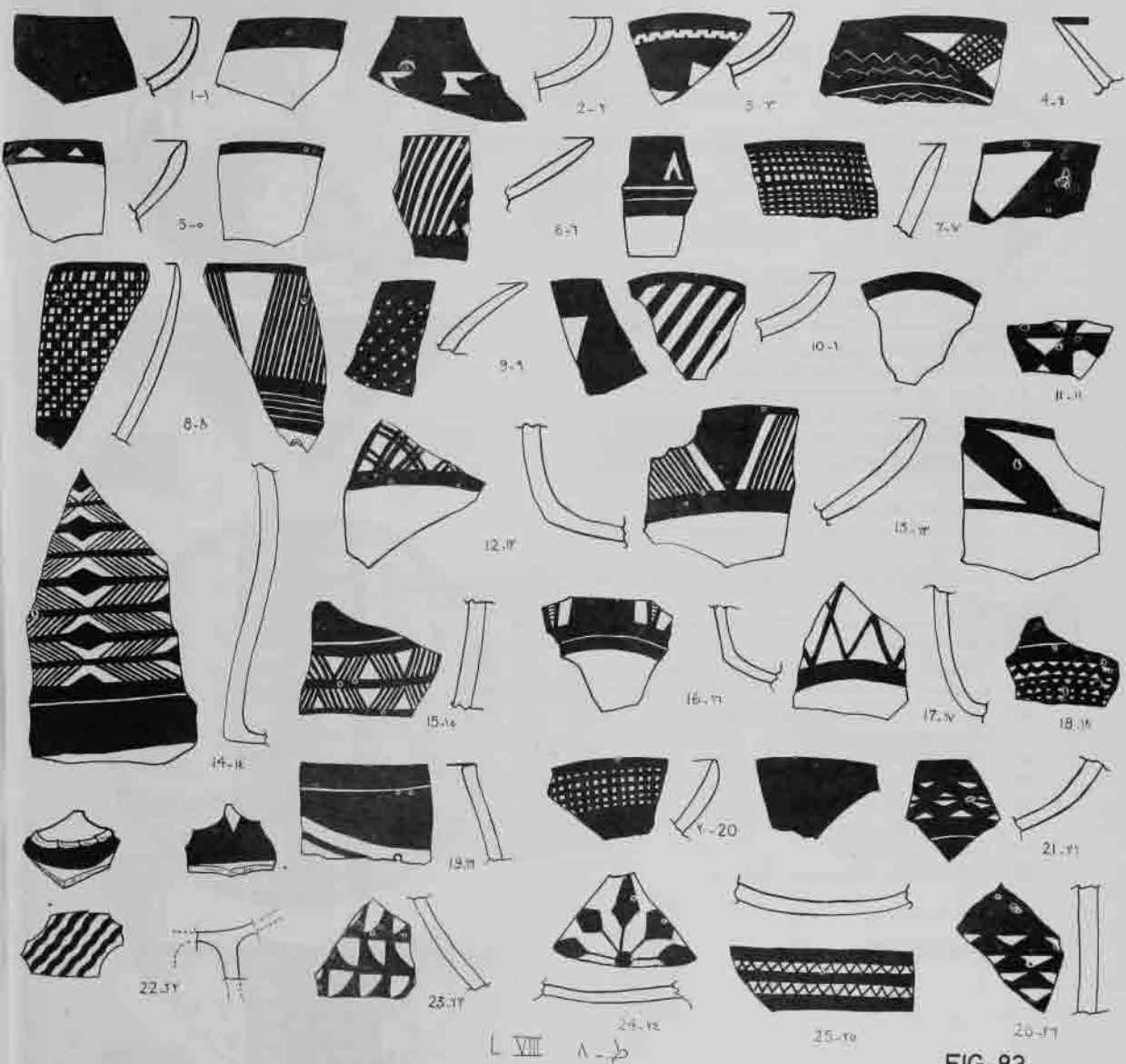


FIG-83

Level IX (Fig. 84)

1. Complete cup in fine, hard, buff clay with yellowish slip. Dark brown paint. Type 19a.
2. Fragment of cup in fine, hard, grayish clay. Own slip. Black paint. Type 19a.
3. Complete cup in fine, hard, brownish clay/slip. Dark chocolate paint. Type 19a.
4. Complete cup in pinkish clay. Brown slip. Chocolate paint. Type 19.
5. Fragment of cup in greenish, over-baked clay. Black paint. Type 19b.
6. Buff clay/slip. Black paint. Type 20.
7. Buff clay/slip. Black paint. Type 20.
8. Buff clay/slip. Black paint. Pattern scratched through paint. Type 26.
9. Fine, buff clay. Cream slip. Black paint. Type 20.
10. Gray clay, whitish slip. Black paint. Type 20.
11. Buff clay. Cream slip. Black paint. Type ?
12. Pinkish clay/slip. Dark brown paint. Type 20.
13. Greenish, over-baked clay/slip. Dark brown paint. Type 6c.
14. Greenish clay/slip. Black paint. Type 20.
15. Buff clay/slip. Black paint. Clumsy survival of Type 32.
16. Kiln-waster in green, over-backed clay. Black paint. Type 23.
17. Detached spout in pinkish clay. Greenish slip, Black paint. Type 2/3.?
18. Greenish clay/slip. Black paint. Type 23.
19. Greenish, over-baked clay. Black paint. Type 32.
20. Pinkish clay, Cream slip. Dark brown paint. Type 30b.?
21. Buff clay/slip. Black paint. Type 16a.
22. Pinkish clay/slip. Brown paint type 17b.
23. Buff clay/slip. Black paint. Type 17.
24. Buff clay/slip. Black paint. Type 6d.
25. Fragment of a cup.
26. Buff clay/slip. Black paint. Type 6a.

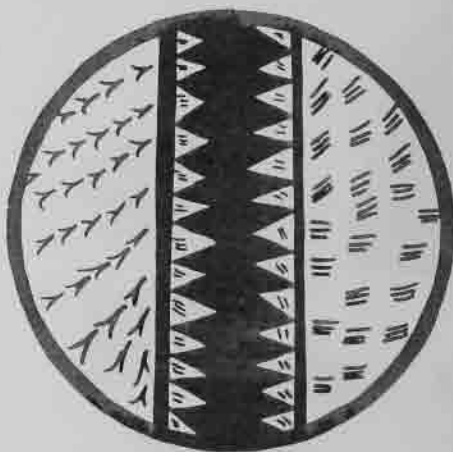
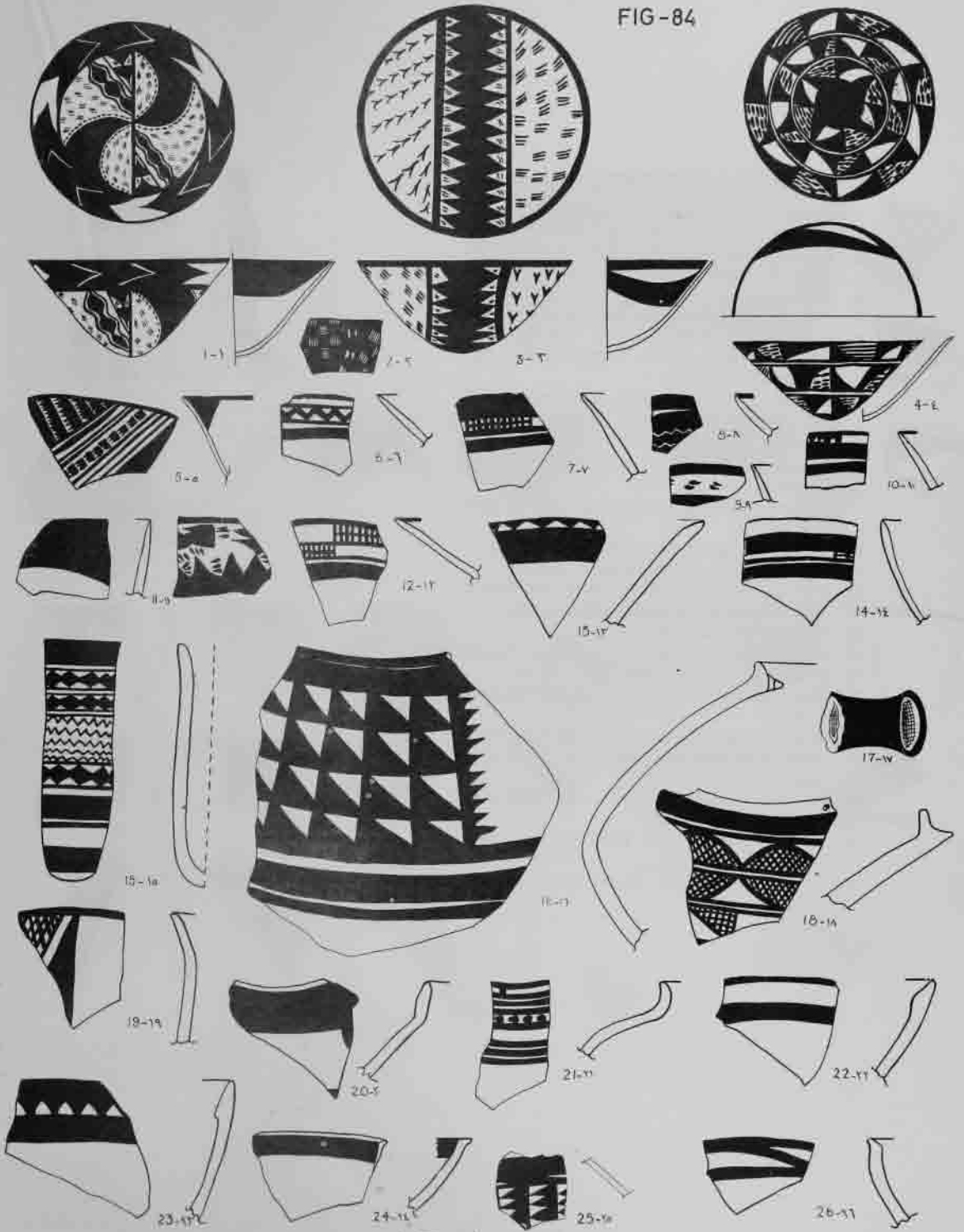


FIG-84



L II 9b

Level IX (Fig. 85)

1. Bottom of a dish in buff clay/slip. Black paint.
2. Buff clay. Cream slip. Black paint. Type 25.
3. Fragment of a boat-shaped vessel in pinkish clay. Cream slip. Chocolate paint.
4. Bottom of a dish.
5. Dish-shoulder in buff clay/slip. Black paint. Type 27.
6. Greenish clay/slip. Purplish paint. Type 24b.
7. Dish-rim in buff clay/slip. Slightly lustrous, dark brown paint. Type 27a.
8. Buff clay/slip. Slightly lustrous, dark brown to black paint. Type 25.
9. Buff clay. Black paint. Type ?
10. Bowl-rim in buff clay. Cream slip. Black paint. Type 26.
11. Bowl-rim in pink clay. Cream slip. Dark red paint. Type 26.
12. Bowl-rim in buff clay/slip. Black paint. Type 26.
13. Fine, cream clay/slip. Black paint. Type 20a.
14. Buff clay. Cream slip. Dark chocolate paint. Type 7a.
15. Fine cream clay/slip. Black paint. Type 20b.
16. Buff clay/slip. Black paint. Type 25.
17. Pinkish clay. White slip. Dark brown paint. Type 26.
18. Fine, cream clay/slip. Black paint. Type 25.
19. Dish-rim in fine, buff clay/slip. Dark chocolate paint. Type 27.
20. Dish-rim in buff clay/slip. Black paint. Type 27c.
21. Bowl-rim in buff clay. White slip. Black paint. Type 26a.
22. Bowl-rim in buff clay. Cream slip. Black paint. Type 26a.
23. Bowl-rim in brown clay. White slip. Dark brown paint. Type 26b.
24. Bowl-rim in buff clay. Cream slip. Black paint. Type 26a.

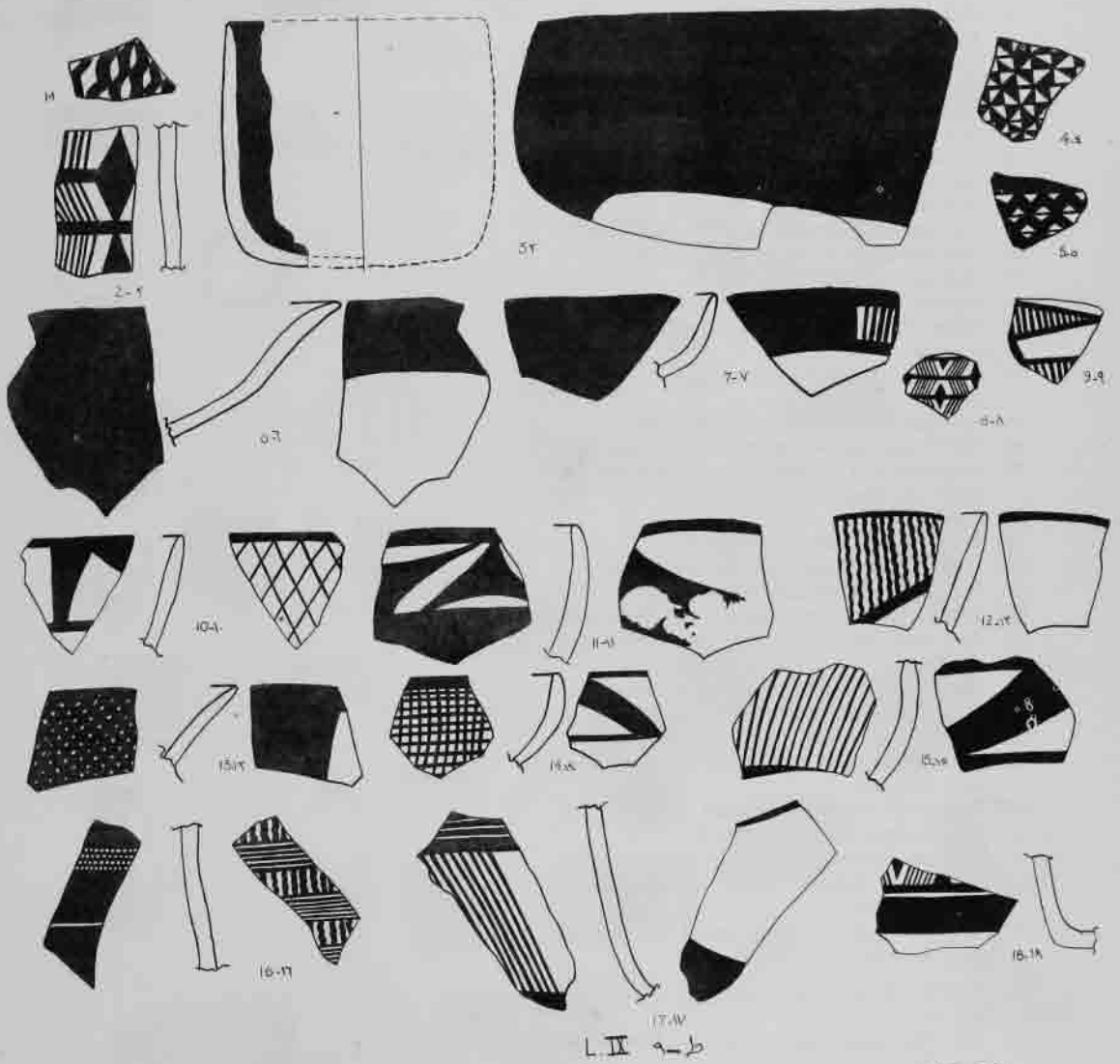


FIG-85

Level X (Fig. 86)

1. Buff clay/slip. Black paint. Type 7c.?
2. Reddish clay. Cream slip. Chocolate paint. Type 7c.
3. Fine, greenish, over-baked clay. Black paint. Type 20.
4. Reddish clay/slip. Black paint. Type 6d.
5. Buff clay/slip. Black paint. Type 20.
6. Greenish-gray clay. Black paint. Type 20.
7. Red clay. Brown slip. Dark brown paint. Type 7.
8. Buff clay/slip. Black paint. Type 20.
9. Dish-rim in reddish clay slip. Black paint. Type 33.
10. Buff clay/slip. Dark brown paint. Type 20.
11. Buff clay/slip. Black paint. Type 20.
12. Dish-rim in buff clay/slip. Black paint. Type 27e.
13. Brown clay/slip. Dark brown paint. Type 20. Bottom of a bowl.
14. Greenish clay/slip. Black paint. Type 20. Bottom of a bowl.
15. Greenish clay/slip. Black paint. Type 20.
16. Cream clay/slip. Reddish brown paint. Type 20.?
17. Fragment of a jar with pierced lugs in red clay. Cream slip. Dark brown paint. Type 9.
18. Jar-rim. Type 31.
19. Buff clay/slip. Black paint. Miniature.
20. Greenish, over-baked clay. Black paint. Type ?
21. Buff clay/slip. Black paint. Perforated rim. Type 23.
22. Bottom of a dish in buff clay/slip. Dark brown paint.
23. Fine buff clay. Cream slip. Dark brown paint. Type 25.
24. Green, over-baked clay. Black paint. Type 29a.
25. Grayish clay/slip. Black paint. Type ?
26. Buff clay/slip. Purple-brown paint. Type 25.
27. Dish-rim in pinkish clay. Cream slip. Dark brown paint. Type 33a.
28. Gray-green clay/slip. Black paint. Type ?
29. Buff clay/slip. Black paint. Type 27.
30. Greenish, over-baked clay. Black paint. Type 24a.
31. Bowl-rim in buff clay. Cream slip. Purple-brown paint. Type 26c.
32. Bowl-rim in greenish, over-baked clay. Jet-black paint. Type 26.
33. Dish-rim in buff clay. Cream slip. Black paint. Type 33.
34. Buff clay. Cream slip. Glossy, dark brown paint. Type 33.
35. Brownish clay. Cream slip. Dark brown paint. Type 26d.
36. Greenish, over-baked clay. Black paint. Type 27c.
37. Pinkish clay. Cream slip. Chocolate paint. Type 33d.



Level XI (Fig. 87)

1. Fragment of a jar with pierced rim, in buff clay. Cream slip. Black paint. Type 23.
2. Ditto.
3. Ditto.
4. Two jar-rims, Type 16.
5. Buff clay. Cream slip. Black paint. Type 16.
6. Greenish, over-baked clay. Black paint. Type 16.
7. Fragment of a jar with pierced rim in yellowish clay. Cream slip. Black paint. Type 23.
8. Greenish, over-baked clay. Black paint. Type 16.
9. Fragment of a jar with pierced rim in buff clay. White slip. Black paint. Type 23.
10. Fragment of a jar with pierced rim in greenish clay/slip. Black paint. Type 23.
11. Sherd in greenish clay/slip, with animal motif in black paint.
12. Jar-rim in buff clay/slip. Jet-black paint. Type 28b.
13. Fragment of a "tortoise" vessel in fine, greenish clay. Own slip. Black paint. Type 15.
14. Sherd in buff clay/slip. Heavy, black paint.
15. Buff clay. Cream slip. Dark, chocolate paint. Type 6c.
16. Greenish clay/slip. Black paint. Type 7.
17. Yellowish clay. Cream slip. Dark, chocolate paint. Type 6c.
18. Yellowish clay. Cream slip. Chocolate paint. Type 6d.
19. Pinkish clay. Cream slip. Chocolate paint. Type 33c.
20. Pinkish clay. Cream slip. Chocolate paint. Type 7.
21. Buff clay. Cream slip. Brown paint. Type 7c.
22. Complete bowl in fine, greenish clay. Own slip. Black paint. Type 20b.
23. Buff clay. Reddish slip. Black paint. Type 34. Channel-spout ?
24. Yellowish clay. Cream slip. Brown paint. Type 24b.
25. Type 7.
26. Bowl-rim in buff clay. Cream slip. Black paint. Type 26.
27. Yellowish clay. Cream slip. Dark red paint. Type 24b.
28. Dish-rim in buff clay/slip. Chocolate paint. Type 33d.



L. XI 1-2

FIG-87

Level XII (Fig. 88)

1. Fine, greenish clay/slip. Black paint. Type 20a.
2. Fragment of a jar with pierced rim in reddish clay. Greenish slip. Black paint. Type 23.
3. Buff clay. Cream slip. Glossy black paint. Type 26.
4. Jar-rim in greenish clay/slip. Black paint. Type 16b.
5. Yellowish clay. Cream slip. Dark, chocolate paint. Type 6c.
6. Buff clay. Cream slip. Black paint. Type 6c.
7. Brownish clay. Cream slip. Reddish brown paint. Type 24a.
8. Reddish brown clay. Brown slip. Chocolate paint. Type 12a.
9. Fine, greenish clay/slip. Black paint. Type 11a.
10. Pink clay. Cream slip. Black paint. Type 7.
11. Pinkish clay. Cream slip. Dark brown paint. Type 24b.
12. Buff clay. White slip. Lustrous, chocolate paint. Type 24a.
13. Buff clay. Cream slip. Black paint. Type 12a.
14. Buff clay. Cream slip. Glossy chocolate paint. Jar ?
15. Buff clay. Cream slip. Chocolate paint. Type 24 ?
16. Buff clay. Cream slip. Dark, purple-brown paint. Type 26a or 36a.
17. Fine grayish clay. Wet-smoothed. Animal motif (?) in black paint.
18. Buff clay. Cream slip. Dark brown paint. Type 33c.
19. Buff clay. Cream slip. Lustrous brown paint. Ornament scratched through paint. Type 25d.
20. Bottom of a dish in cream clay/slip. Purple-brown paint.
21. Greenish clay/slip. Black paint. Type 25b.
22. Buff clay. Cream slip. Brown paint. Type 24a.
23. Fine, greenish clay/slip. Black paint. Type 20a.
24. Ditto.
25. Fragment of some sort of chalice in greenish clay/slip. Ornament scratched through black paint.
26. Buff clay. Greenish slip. Black paint. Type 12a.
27. Sherd in buff clay. Cream slip. Glossy black paint.
28. Fragment of a boat-shaped (?) vessel in greenish clay/slip. Black paint.

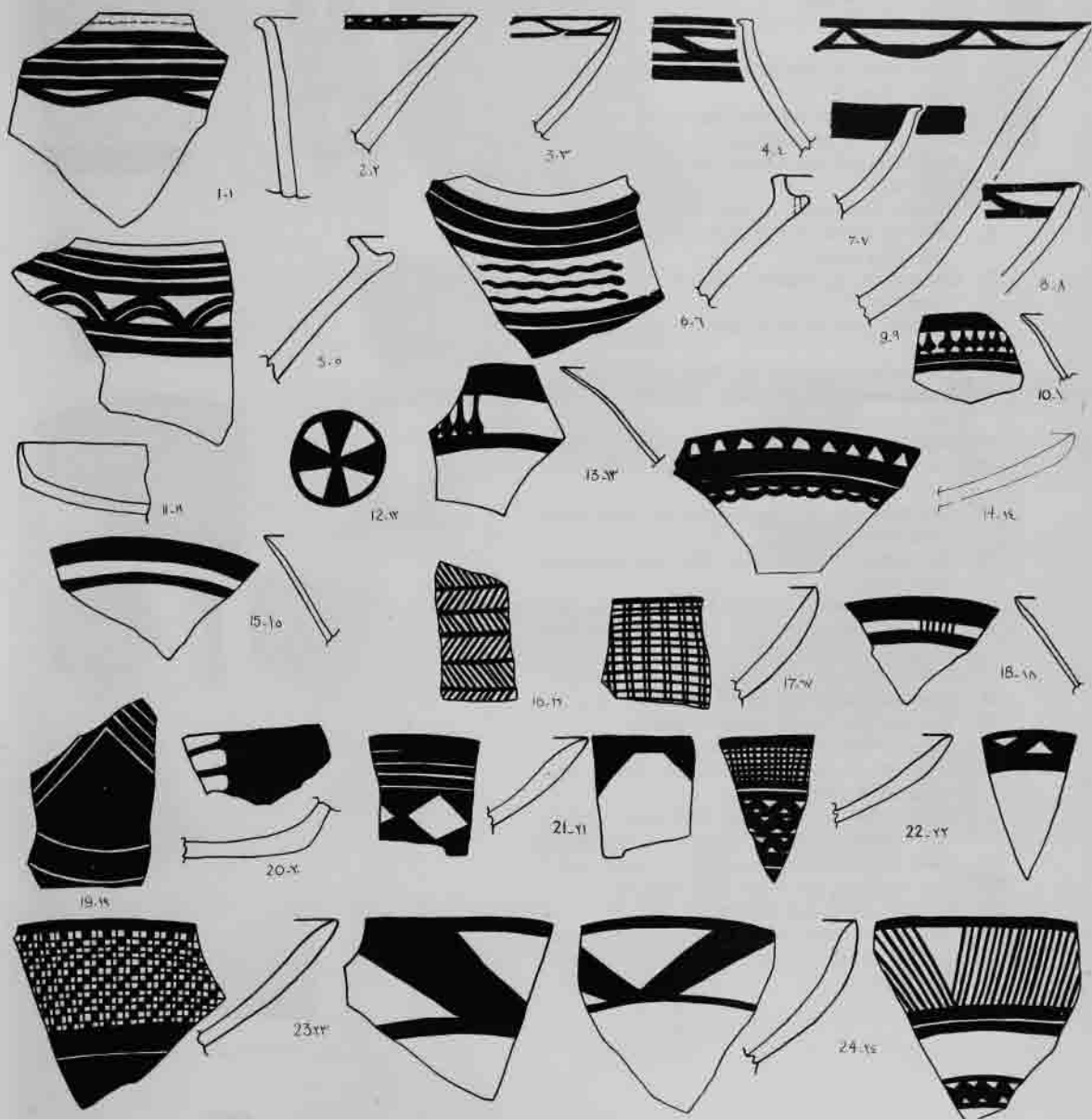


L.XII

FIG-88

Level XIII (Fig. 89)

1. Brown clay. Cream slip. Black paint. Type 7.
2. Greenish, over-baked clay. Black paint. Type 6.
3. Brown clay/slip. Chocolate paint. Type 7a.
4. Greenish clay. Cream slip. Chocolate paint. Type 6d.
5. Fragment of a jar with pierced rim in buff clay. Cream slip. Black paint. Type 23.
6. Fragment of a jar with pierced rim in cream clay/slip. Thick chocolate paint. Type 23.
7. Cream clay/slip. Black paint. Type 6d.
8. Cream clay/slip. Black paint. Type 6b.
9. Fragment of a large bowl in greenish clay/slip. Black paint. Type 6d.
10. Fine cream clay/slip. Black paint. Type 20.
11. Cream clay/slip. Black paint. Type 27.
12. Jar-shoulder sherd in greenish clay/slip. Black paint.
13. Fine cream clay/slip. Black paint. Type 20a.
14. Buff clay. Cream slip. Dark chocolate paint. Type 7a.
15. Fine cream clay/slip. Black paint. Type 20b.
16. Sherd in buff clay/slip. Black paint.
17. Dish-rim in pinkish clay. White slip. Dark brown paint. Type 33a.
18. Fine cream clay/slip. Black paint. Type 20b.
19. Dish-bottom in fine buff clay/slip. Dark chocolate paint. Type 27.
20. Bottom of a bowl in buff clay/slip. Black paint. Type 27c.
21. Dish-rim in buff clay. White slip. Black paint. Type 33a.
22. Dish-rim in buff clay. Cream slip. Black paint. Type 33a.
23. Dish-rim in brown clay. White slip. Dark brown paint. Type 26b. 33a.
24. Bowl-rim in buff clay. Cream slip. Black paint. Type 26.



L. XIII

FIG-89

Level XIV (Fig. 90)

1. Dish-bottom in greenish, over-baked clay. Black paint. Type 27.
2. Sherd in brownish clay/slip. Black paint.
3. Dish-bottom in greenish clay/slip. Black paint.
4. Dish-rim in buff clay. Cream slip. Dark brown paint. Type 33d.
5. Buff clay. Cream slip. Jet-black paint. Type 25c.
6. Part of the bottom of an oval dish in buff clay. Cream slip. Black paint.
7. Dish-bottom in reddish clay/slip. Black paint. Type 33c.
8. Fragment of a lid (?) in greenish clay/slip. Black paint.
9. Dish-bottom in buff clay/slip. Black paint. Type 33.
10. Centre-medallion in black paint in greenish clay/slip.
11. Sherd in cream clay. Whitish slip. Thick black paint.
12. Dish-bottom in buff clay. Yellow slip. Dark brown paint. Type 27.
13. Dish-bottom in buff clay. Whitish slip. Black paint. Type 33.
14. Dish-bottom in brown clay. Own slip. Chocolate paint. Type 33c.
15. Dish-rim in greenish clay/slip. Black paint. Type 33d.
16. Dish-rim in brown clay/slip. Chocolate paint. Type 27, 33d.
17. Pinkish clay. Cream slip. Chocolate paint. Type 24a.
18. Cream clay white slip. Glossy black paint. Type 21.
19. Yellowish clay/slip. Black paint. Type 24.
20. Buff clay/slip. Glossy black paint. Type 25d.
21. Dish with ring-base in pinkish clay. Whitish slip. Dark brown paint. Type 33c.
22. Sherd in buff clay. White slip. Dark brown paint.
23. Fine buff clay. Cream slip. Black paint. Type 32.
24. Sherd in buff clay. Yellowish slip. Chocolate paint.
25. Fine cream clay/slip. Black paint. Type 32.
26. Buff clay. Cream slip. Black paint. Type 27.
27. Dish-rim in buff clay/slip. Chocolate paint. Type 33c.
28. Jar-rim in pinkish clay. Cream slip. Chocolate paint. Type 28b.



L.XIV

FIG-90 91

Level XIV (Fig. 91)

1. Buff clay. Whitish slip. Very dark brown paint. Type 25b.
2. Greenish clay/slip. Black paint. Stem of a chalice?
3. Buff clay. Light slip. Thick, lustrous black clay, fading to greenish. Type 24a.
4. Dish-rim Type 24a.
5. Buff clay. Light slip. Dark brown paint. Type 24a.
6. Buff clay. Light slip. Dark chocolate paint. Type 25.
7. Greenish clay. Cream slip. Slightly glossy black paint. Type ?
8. Buff clay. Light slip. Very Glossy. Dark brown paint. Type 25.
9. Sherd...
10. Buff clay. White slip. Brown paint. Type 25c.
11. Type 16 ?
12. Light pinkish clay. Cream slip. Chocolate paint. Type 31.
13. Sherd in buff clay. Cream slip. Lustrous brown paint.
14. Pinkish clay/slip. Reddish-brown paint. Type 11.
15. Greenish clay/slip. Black paint. Type 20.
16. Sherd in cream clay/slip. Chocolate paint.
17. Buff clay. Cream slip. Black paint. Type 25.
18. Buff clay. Cream slip. Black paint. Type 34.
19. Buff clay. White slip. Lustrous chocolate paint. Type 20b.
20. Buff clay. Cream slip. Dark brown paint. Type 25d.
21. Very thin. Greenish, over-baked clay. Black paint. Type 11.
22. Part of the bottom of an oval-shaped vessel with lustrous black paint. Type 25 ?
23. Buff clay. Cream slip. Reddish brown paint. Type 25.
24. Fragment of dish-bottom in fine buff clay. Cream slip. Glossy black paint. Type 27.



L. XIV

FIG-91 90

Level XV (Fig. 92)

1. Cream clay/slip. Black paint. Type 26.
2. Bowl-rim in yellowish clay. Cream slip. Dark brown paint. Type 26d.
3. Cream clay/slip. Black paint. Type 27b.
4. Dish-rim in greenish, over-baked clay. Black paint. Type 33a.
5. Dish-rim in buff clay. Cream slip. Chocolate paint. Type 33a.
6. Dish-rim in yellowish clay. Cream slip. Black paint. Type 33d.
7. Dish-rim in buff clay. Cream slip. Glossy chocolate paint. Type 33d.
8. Dish-rim in greenish buff clay. Own slip. Black paint. Type 33d.
9. Dish-bottom in brownish clay/slip. Black paint. Type 33.
10. Bowl-rim in yellowish clay. Whitish slip. Dark brown paint. Type 27.
11. Bowl-rim in buff clay. Cream slip. Black paint. Type 27.
12. Sherd in buff clay. Cream slip. Black paint.
13. Dish-bottom in buff clay/slip. Brown paint. Type 26.
14. Yellowish clay. Cream slip. Brown paint. Type 26b.
15. Buff clay. Cream slip. Black paint. Type 27e.
16. Bowl-herd in grayish clay/slip. Tassel ornament in black paint. Type 26.
17. Dish-herd. Greenish clay. Cream slip. Black paint. Type 27.
18. Dish-rim in buff clay. Cream slip. Black paint. Type 33.
19. Dish-rim in buff clay. Cream slip. Glossy black paint. Type 27.
20. Dish-bottom in yellowish clay. Cream slip. Dark chocolate paint. Type 26.
21. Bowl-rim in pinkish clay. White slip. Chocolate paint. Type 26d.
22. Bowl-rim in buff clay. Cream slip. Black paint. Type 26.
23. Brownish clay. Cream slip. Black paint. Type 32.
24. Dish-rim in brownish clay. Cream slip. Black paint. Type 33d.
25. Sherd in pinkish clay. Cream slip. Brown paint. Inner surface burnished.
26. Sherd in buff clay. Whitish slip. Dark brown paint. Type 27a.
27. Dish-bottom in buff clay cream slip. Black paint. Type 27 ?
28. Sherd in yellowish clay. Whitish slip. Black paint. Type 27.
29. Buff clay. Cream slip. Glossy black paint. Type 25 ?
30. Greenish clay/slip. Black paint. Type 34?
31. Bowl-rim in fine buff clay. Own slip. Black paint. Type 20b.

L.XV FIG-92



Level XV (Fig. 93)

1. Dish-rim in pinkish clay. Cream slip. Dark chocolate paint. Type 27e
2. Bowl-rim in greenish clay/slip. Black paint. Type 26c.
3. Rim-shoulder in fine gray clay. Cream slip. Thick black paint. Type ?
4. Yellowish clay. Cream slip. Dark chocolate paint. Type 26d.
5. Greenish clay. Cream slip. Black paint. Type 29b.
6. Jar-shoulder in brick-red clay. Cream slip. Red paint.
7. Buff clay. Cream slip. Black paint. Type 29a.
8. Buff clay. Cream slip. Black paint. Type 26e ?
9. Pinkish clay. Cream slip. Black paint. Type 25a.
10. Buff clay/slip. Black paint. Type 25b.
11. Buff clay. Yellowish slip. Dark chocolate paint. Type ?

Level XVI (Fig. 94)

1. Dish-rim in buff clay. Cream slip. Black paint. Type 33a.
2. Dish-bottom in buff clay. Cream slip. Lustrous black paint. Type 33.
3. Dish-rim in buff clay. Cream slip. Black paint. Type 33a.
4. Circular dish with ring-base in buff clay. Cream slip. Black paint. Type 33b.
5. Dish-bottom in buff clay. Cream slip. Dark brown paint. Type 33.
6. Bowl-rim in greenish over-baked clay. Black paint. Type 26b.
7. Dish-rim in buff clay. Cream slip. Black paint. Type 27.
8. Bowl-rim in buff clay. Cream slip. Black paint. Type 26.
9. Dish-rim in buff clay. Cream slip. Black paint. Type 33d.
10. Dish-rim in greenish clay. Cream slip. Thick. Black paint. Type 33d.
11. Dish-rim in brownish clay. Cream slip. Black paint. Type 27.
12. Dish-rim in reddish clay. Cream slip. Brown paint. Type 27.
13. Dish-rim sherd in greenish clay/slip. Black paint. Type 33a.
14. Dish-rim in brownish clay. Cream slip. Black paint. Type 33d.

L.XVI FIG-94



Level XVI (Fig. 95)

1. Greenish clay. Cream slip. Lustrous black paint. Type 25.
2. Buff clay. Cream slip. Black paint. Type 25.
3. Buff clay. White slip. Black paint. Type 27b.
4. Pinkish clay. Whitish slip. Dark brown paint. Type 25a. Perhaps oval.
5. Greenish clay slip. Black paint. Type 25. Probably oval.
6. Buff clay. Cream slip. Black paint. Type 34.
7. Greenish over-baked clay. Black paint. Perhaps oval with spout.
8. Greenish over-baked clay. Black paint. Type 25b. Oval.
9. Coarse, straw-tempered ware. Pinkish clay. Brown slip. Black paint. Type 25b.
10. Coarse. Pinkish ware. Cream slip. Black paint. Type 25b.
11. Reddish clay. Whitish slip. Dark brown paint. Type 29b.
12. Greenish clay/slip. Black paint. Type 25. Oval.
13. Buff clay. Cream slip. Black to brown paint. Type 26d.
14. Buff clay. Cream slip. Black paint. Type 31.
15. Buff clay. Cream slip. Thick, glossy, dark brown paint. Type 31.
16. Buff clay. Cream slip. Chocolate paint. Miniature.
17. Jar-sherd in buff clay. Cream slip. Thick black paint.
18. Buff clay. Cream slip. Purplish black paint. Type 28.
19. Sherd in yellowish clay. Cream slip. Black paint.
20. Jar-sherd in buff clay. Greenish slip. Black paint.
21. Jar-sherd in greenish clay/slip. Black paint.
22. Jar-sherd in pinkish clay. Cream slip. Black paint.
23. Jar-sherd in buff clay/slip. Black paint.



L. XVI

FIG-95

Level XVI (Fig. 96)

1. Bowl-rim Type 26.
2. Dish-rim in buff clay. White slip. Thick, lustrous black paint. Type 27e.
3. Dish-rim in pinkish clay. Cream slip. Dark, chocolate paint. Type 26d.
4. Dish-Rim Type 26.
5. Dish-bottom in pinkish clay. Cream slip. Dark brown paint. Type 27.
6. Buff clay. Cream slip. Dark chocolate paint. Type 27b.
7. Dish-rim in buff clay. Cream slip. Dark chocolate paint. Type 33d.
8. Buff clay. Cream slip. Dark chocolate paint. Type 27c.
9. Dish-rim in buff clay. White slip. Glossy black paint. Type 33d.
10. Bowl-rim in yellowish clay. Cream slip. Dark chocolate paint. Type 26b.
11. Dish-bottom in brownish clay/slip. Black paint. Type 27c.
12. Dish-bottom in buff clay. Cream slip. Black paint. Type 27.
13. Dish-bottom in pinkish clay. Cream slip. Chocolate paint. Type 27.
14. Dish-bottom in buff clay. Cream slip. Black paint. Oval.
15. Dish-bottom in pinkish clay. Yellowish slip. Dark red paint. Oval.
16. Dish-bottom in yellowish clay. Cream slip. Chocolate paint.
17. Buff clay. White slip. Black paint. Type 26.
18. Greenish over-baked clay. Black paint. Type 28.
19. Greenish over-baked clay. Black paint. Type 32.
20. Cream clay/slip. Black paint. Type 32b.
21. Cream clay/slip. Lustrous black paint. Type 32a.
22. Fine pinkish clay. Cream slip. Thick. Black paint. Type 32b.
23. Fine yellowish clay. Cream slip. Dark chocolate paint. Type 32a.
24. Cream clay/slip. Dark brown paint. Type 32.
25. Fine buff clay/slip. Dark brown paint. Type 32.
26. Yellowish clay/slip. Black paint. Type 32 ?



L.XVI FIG-96

Level XVII (Fig. 97)

1. Bowl-rim in greenish clay. Whitish clay. Thick black paint. Type 26d.
2. Dish-rim in greenish clay. Cream slip. Lustre black paint. Type 27a.
3. Buff clay. Cream slip. Dark chocolate paint. Type 33d.
4. Dish-rim in greenish clay. Cream slip. Black paint. Type 33d.
5. Greenish clay. Cream slip. Black paint. Type 33d.
6. Part of a flat, oval dish. Type 33a. Three rivet holes.
7. Dish-rim in pinkish clay. Cream slip. Light brown paint. Type 27.
8. Bowl-rim in pinkish clay. Cream slip. Dark chocolate paint. Type 26.
9. Bowl-rim in greenish over-baked clay. Black paint. Tassel ornament. Type 26.
10. Dish-bottom in greenish clay. Light slip. Black paint.
11. Bowl-rim in greenish clay/slip. Black paint. Tassel ornament. Oval. Type 26.
12. Pinkish clay/slip. Brown paint. Miniature.
13. Bowl-rim in buff clay. Cream slip. Black paint. Tassel ornament. Type 26d.
14. Bowl-rim in pinkish clay. Cream slip. Chocolate paint. Type 26d. Oval.
15. Sherd in buff clay. Cream slip. Black paint.
16. Dish-rim in pinkish clay. Light slip. Dark chocolate paint. Type 33d.
17. Bowl-rim in pinkish clay. Cream slip. Brown paint. Type 26. Oval.
18. Jar-shoulder (?) in greenish clay. Cream slip. Dark brown paint.

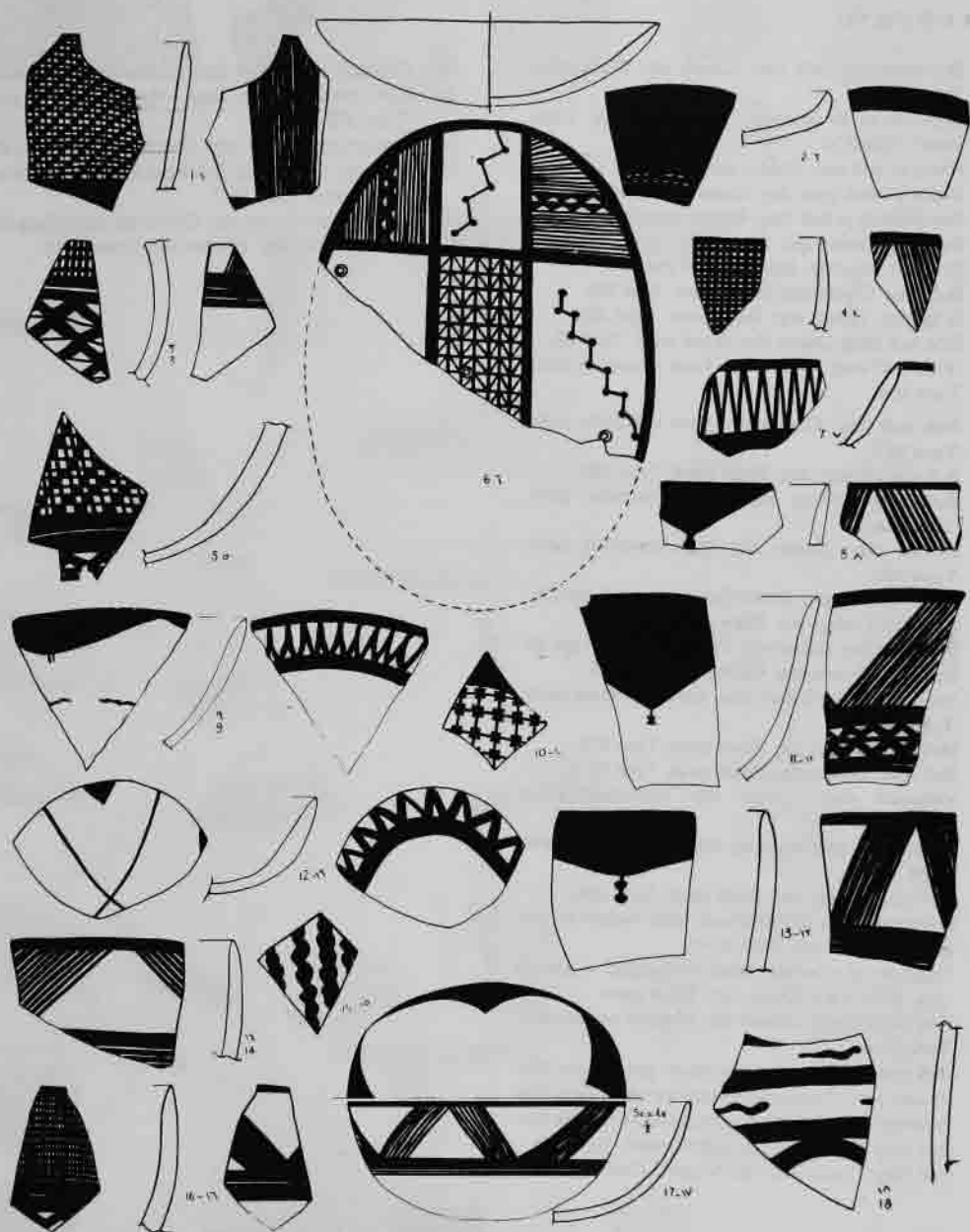


FIG. 76

Level XVII (Fig. 98)

1. Dish-bottom in buff clay. Cream slip. Black paint. Type 33a.
2. Dish-bottom in greenish, over-baked clay. Black paint. Type 27a.
3. Sherd in buff clay. Cream slip. Chocolate paint.
4. Sherd in hard gray clay. Cream slip. Black paint.
5. Dish-bottom in buff clay. Cream slip. Black paint.
6. Buff clay. Cream slip. Black paint. Type 26d.
7. Greenish clay/slip. Black paint. Type 32a.
8. Buff clay. Cream slip. Black paint. Type 28a.
9. Gray clay. Cream slip. Black paint. Type 28b.
10. Fine buff clay. Cream slip. Black paint. Type 32.
11. Gritty buff clay. Cream slip. Dark chocolate paint. Type 29a.
12. Fine buff clay. Cream slip. Dark chocolate paint. Type 29 ?
13. Buff clay. Cream slip. Black paint. Type 28b ?
14. Buff clay. Cream slip. Dark chocolate paint. Type 28a ?
15. Pinkish clay. Cream slip. Dark chocolate paint. Type 30b.
16. Greenish clay/slip. Dark chocolate paint. Type 28b ?
17. Buff clay. Cream slip. Black paint. Miniature.
18. Yellowish clay. Cream slip. Chocolate paint. Type 28.
19. Buff clay. Cream slip. Black paint. Type 28.
20. Yellowish clay. Cream slip. Dark chocolate paint. Type 28b.
21. Buff clay. Cream slip. Black paint. Type 27b.
22. Buff clay. Cream slip. Black paint. Type 28 ?
23. Yellowish clay. Cream slip. Chocolate paint. Type 28b.
24. Jar-sherd in yellowish clay. Cream slip. Black paint. Type ?
25. Buff clay. Cream slip. Black paint. Type 28b.
26. Fragment of a flat-bottomed, oval vessel in buff clay/slip. Lustrous black paint.
27. Fragment of a vertical-sided, oval vessel in grayish clay. Black core. Cream slip. Black paint.
28. Fine pinkish clay. Cream slip. Reddish brown paint. Type 29a.
29. Buff clay. Cream slip. Dark brown paint. Type 28b.
30. Pinkish clay. Cream slip. Chocolate paint. Type 28b.
31. Yellowish clay. Cream slip. Chocolate paint. Type 29a.
32. Buff clay. Cream slip. Chocolate paint. Type 29b.
33. Buff clay. Cream slip. Black paint. Oval. Type 23?
34. Fine buff clay. Cream slip. Chocolate paint. Type 25a.
35. Buff clay. Cream slip. Purple brown paint. Type 30b ?
36. Pinkish clay. Cream slip. Chocolate paint. Type 28a.
37. Buff clay. Cream slip. Black paint. Perhaps oval with open spout. Type 34 ?
38. Pinkish clay. Cream slip. Chocolate paint. Type 29a.
39. Sherd in buff clay. Whitish slip. Black paint.

FIG-98



Level XVIII (Fig. 99)

1. Bowl-rim in yellowish clay. Cream slip. Type 29b. Oval.
2. Dish-herd in yellowish clay. Cream slip. Chocolate paint. Type 27.
3. Dish-herd in yellowish clay. Cream slip. Thick black paint. Type 27 ?
4. Pinkish clay. Cream slip. Black paint. Type 27.
5. Centre medallion in black paint in buff clay. Greenish slip.
6. Dish-rim in yellowish clay. Cream slip. Brown paint. Type 33d. Rivet-hole.
7. Bowl-rim in buff clay. Whitish slip. Dark chocolate paint. Type 26.
8. Centre medallion in black paint on greenish over-baked clay.
9. Bowl-rim in pinkish clay. Cream slip. Black paint. Type 26b.
10. Jar-herd in buff clay. Cream slip. Black paint.
11. Buff clay. Cream slip. Black paint. Type 28a.
12. Centre medallion in black paint on greenish clay/slip.
13. Dish-bottom in yellowish clay. Cream slip. Black paint.
14. Centre medallion in thick black paint on greenish clay. Light slip.
15. Dish-rim in pinkish clay. Cream slip. Black paint. Type 33d.
16. Bowl-rim in yellowish clay. Cream slip. Dark chocolate paint. Type 26.
17. Buff clay. Cream slip. Dark chocolate paint. Type 29a.
18. Sherd in buff clay. Cream slip. Black paint.
19. Dish-rim in pinkish clay. Cream slip. Black paint. Type 33d.
20. Greenish clay. Cream slip. Dark chocolate paint. Type 33d.
21. Yellowish clay. Cream slip. Black paint. Type 29.



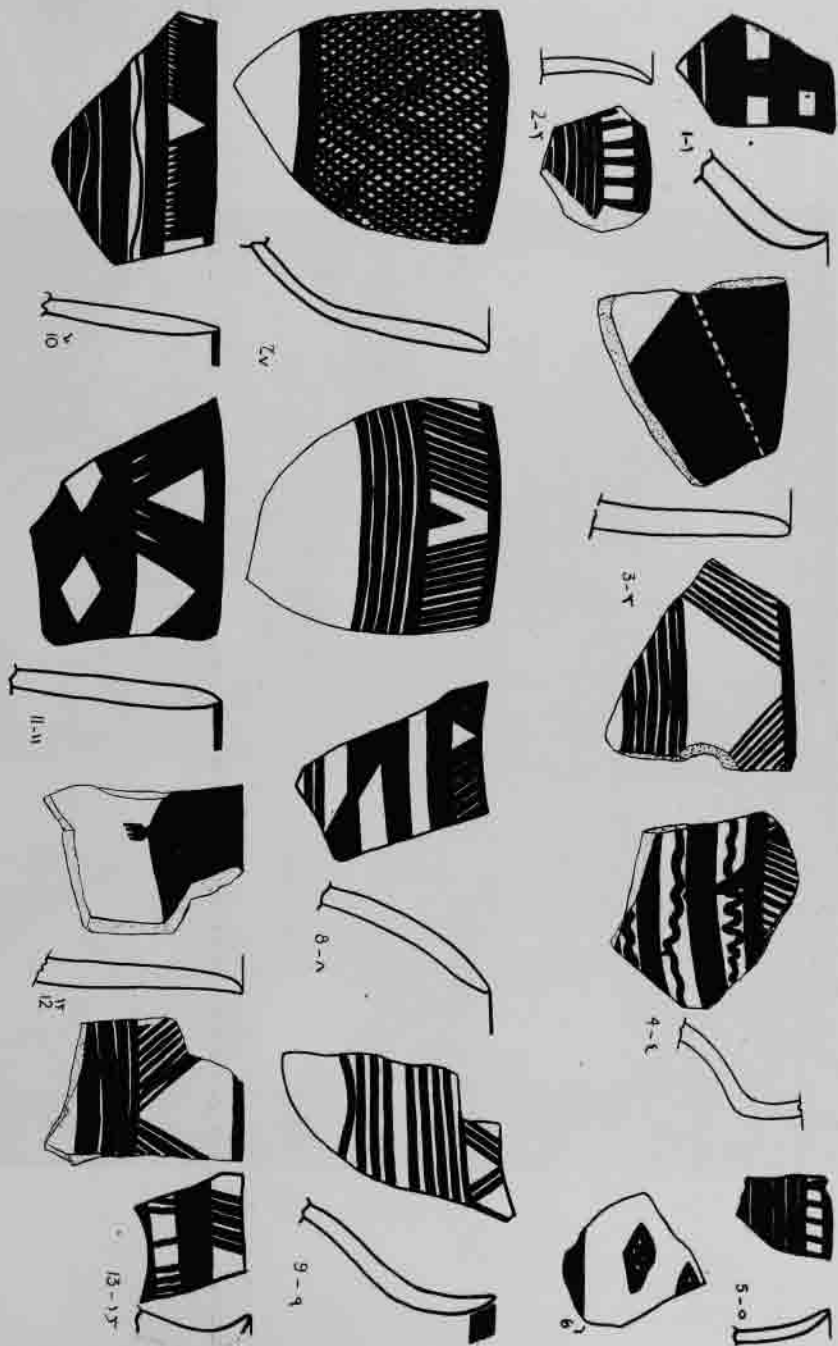
FIG-99

Level XIX (Fig. 100)

1. Buff clay/slip. Dark brown paint. Type 30b.
2. Whitish clay. Cream slip. Black paint. Type 28.
3. Bowl-rim in greenish porous clay/slip. Black paint. Type 26d.
4. Pinkish clay. Greenish slip. Black paint. Type 30a.
5. Brownish clay. Cream slip. Brown paint. Type 29.
6. Sherd in greenish clay/slip. Dark brown paint. D.
7. Bowl-rim in dark clay/slip. Black paint. Type 26d.
8. Greenish clay/slip. Brown paint. Type ?
9. Buff clay. Cream slip. Chocolate paint. Type 28b.
10. Buff clay/slip. Brown paint. Type 26e. Oval ?
11. Pinkish clay/slip. Purple brown paint. Type 26e ?
12. Pinkish clay. Cream slip. Reddish brown paint. Tassel ornament.
13. Pinkish clay. Cream slip. Chocolate paint. Type 29a.

L. XIX 11-2

FIG-100



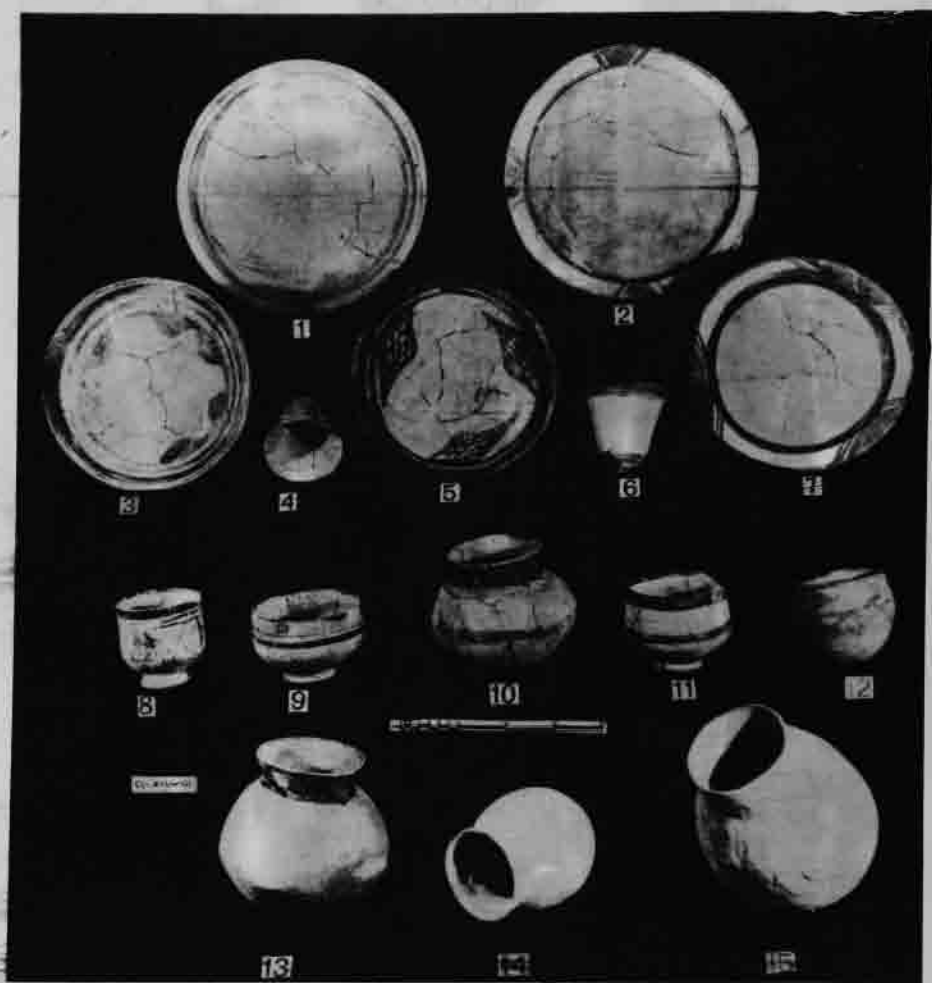


FIG 101



FIG. 102



FIG. 103



FIG. 104

FIG. 105





FIG. 106

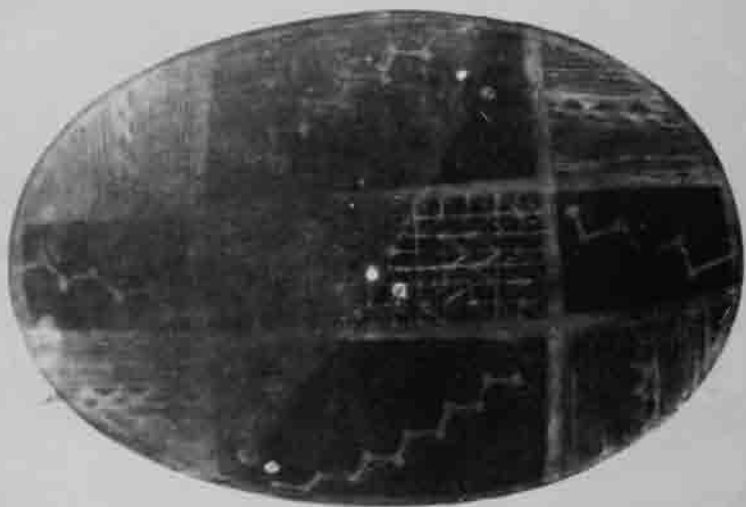
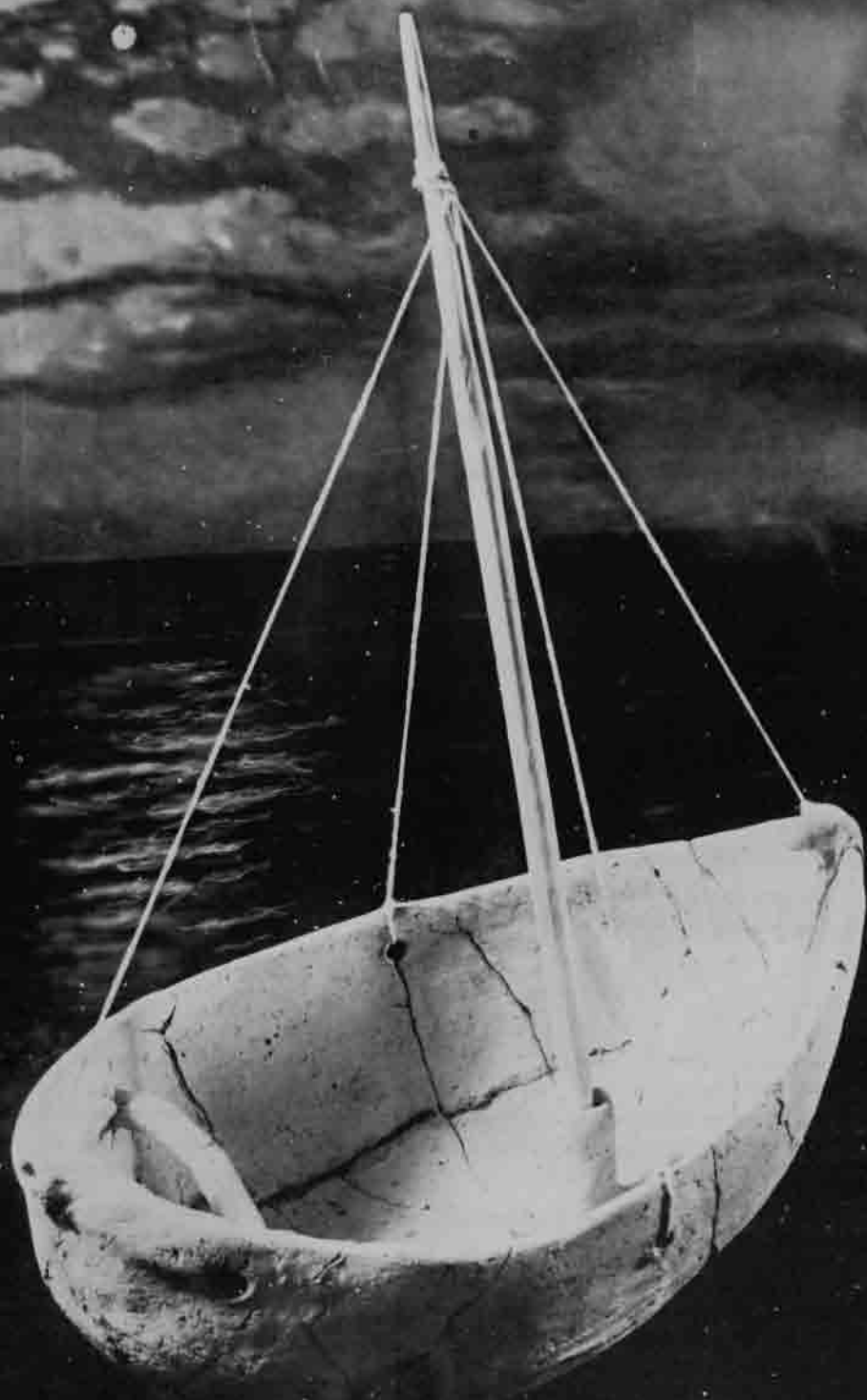




FIG. 107

CHAPTER 6
OBJECTS

CHAPTER 8
SELECT



A. Inscribed Bricks

The following five inscriptions are stamped on bricks found at Mound Abu Shahrein. The dimensions of these bricks, their frequency, and the locations where they were found, are given in Chapter 3, Section (B) which deals with the ziggurat and its surrounding.

With the exception of No. 2 (Fig. 108) these

1) ur-^dnammu, lugal ur^{ki}-ma, lugal ^den-ki, eridu^{ki}-ga in-du-a

Ur-Nammu, king of Ur, he who has built the temple of Enki in Eridu.

2) ^den-ki, lugal-a-ni, ur-^dnammu, nita-kal-ga, lugal ur^{ki}-ma, lugal ki-en-gi, ki-uri-ke₄, e-a-ni, mu-na-du

For Enki his king, Ur-Nammu the mighty man, king of Ur, king of Sumer and Akkad, his temple has built.

3) ^damar-^dsu en, ^den-ii-le, nibru^{ki}-a, mu-pa-da, sag-us, e-^den-ii-ka, lugal-kal-ga, lugal-ur^{ki}-ma, lugal an-ub-da limmu-ba-ke₄, ^den-ki, lugal-ki-ag-ga-ni-ir, abzu-ki-ag-ga-ni, mu-na-du

Amar-Sin, who was appointed by Enlil at Nippur, the permanent benefactor to the temple of Enlil, the mighty king, king of Ur, king of the four quarters, has built for Enki, his beloved king, his beloved Apzu.

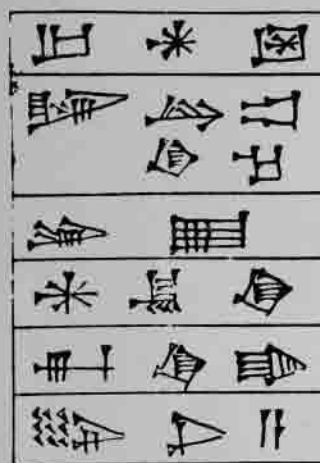
inscriptions were published by Campbell Thompson in 1920 in his report about his excavations at Abu Shahrein. The following modified reading and translation of these inscriptions are kindly prepared by Dr. Fauzi Rashid, the Curator of the Iraq Museum.

4) nu-ur-^dadad, nita-kal-ga, engar-zi ur^{ki}-ma, lugal larsa^{ki}-ma, me es-e-babbar-ra, ku-ku-ge, eridu^{ki} u₄-ul-li-a-ta, su mu-un-hul-a-[ba], bal-a-ni si-sa mu-us, du-de al bi-du, ^den-ki-ke₄, ki-dur-ku ki-ag-ga-ni, mu-na-du, gishur-ul-li-a-ka-ni, ki-bi mu-na-[gi₄]

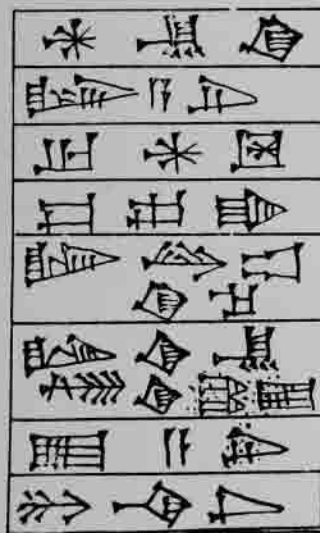
Nur-Adad, the mighty man, the true cultivator of Ur, king of Larsa, who looks after the purity of the Divine might (me) of the sanctuary E-babbar, for building Eridu which was left since long ago, wished it to be in harmony with his just reign. For Enki his beloved dwelling place, he built and reconstructed it in its original plan and place.

5) ^dnabu-ku-dur-ri-usur LUGAL KA DINGIR RA KI za-nin E.SAG. ILA u E.ZI.DA ap-lum a-sa-ri-du sa ^dnabu-apla-usur LUGAL KA DINGIR. RA, KI

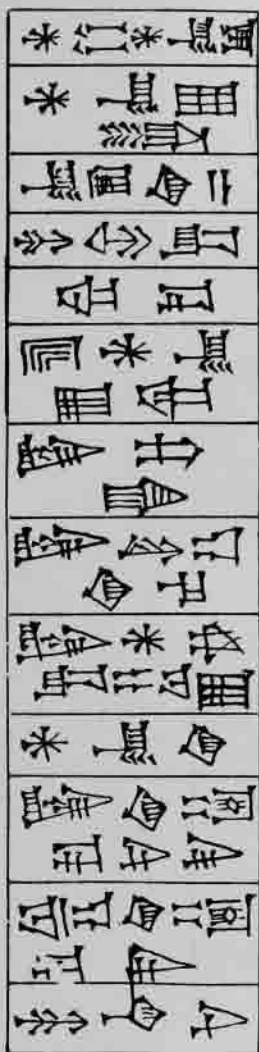
Nebuchadnezzar king of Babylon, who looks after Esagila and Ezida, the first born son, of Nebupalassar, the king of Babylon.



1



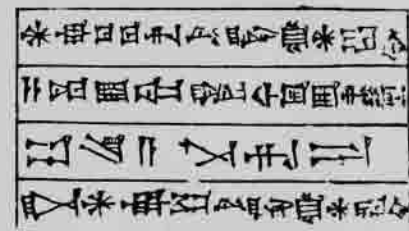
2



3



4



5

FIG. 108

B. Small Finds

In the first two seasons, there is quite a number of small objects in stone, copper or clay, many of which were found in the surface of the Tell Abu Shahrein, entered in the field register, and they should be studied later in detail especially the flint and stone implements which found in the various temples and need to be studied by specialists according to the strata in which they were found. We publish here the stratified and the outstanding pieces:

A unique unpainted carinated jar in reddish clay, wet smoothed, decorated with six quadruple nipples on the edge of the shoulder, is 30 cm high, 45 cm. the diameter of the body. It was found in Temple XI and should be standard Ubaid ware, yet somewhat strange in shape and clay (IM. 55024) (see Fig. 109).

Two parts of a snake in buff clay decorated in chocolate in circles and lines, were found in Temple VII (Fig. 110); the head was found in the first season near the south corner of the central chamber, and the body (34 cm. long) in the second season inside the altar (IM. 54895 & 54899). There is a hole penetrating through the neck and mouth. This snake, relatively short and thick, looks like the type existing in the region of Abu Shahrein known as **Al-Batra**.

A model of a sailing boat, in greenish buff clay, each end rounded and curving inwards, with holes for fastening the mast by strings, and a socket for the mast. It is 26 cm. long, 15.5 cm. wide, 10 cm. found near the surface at the Ubaid cemetery above burial no. 51 (IM. 54900) (Fig. 111).

Another model of an ordinary boat, incomplete and restored, in terra-cotta, measuring 23 x 13 x 12 cm. was found in the Ubaid settlement situated to the southeast of the Ubaid cemetery (IM. 55118).

Another fragment from the end of another sailing boat was also discovered.

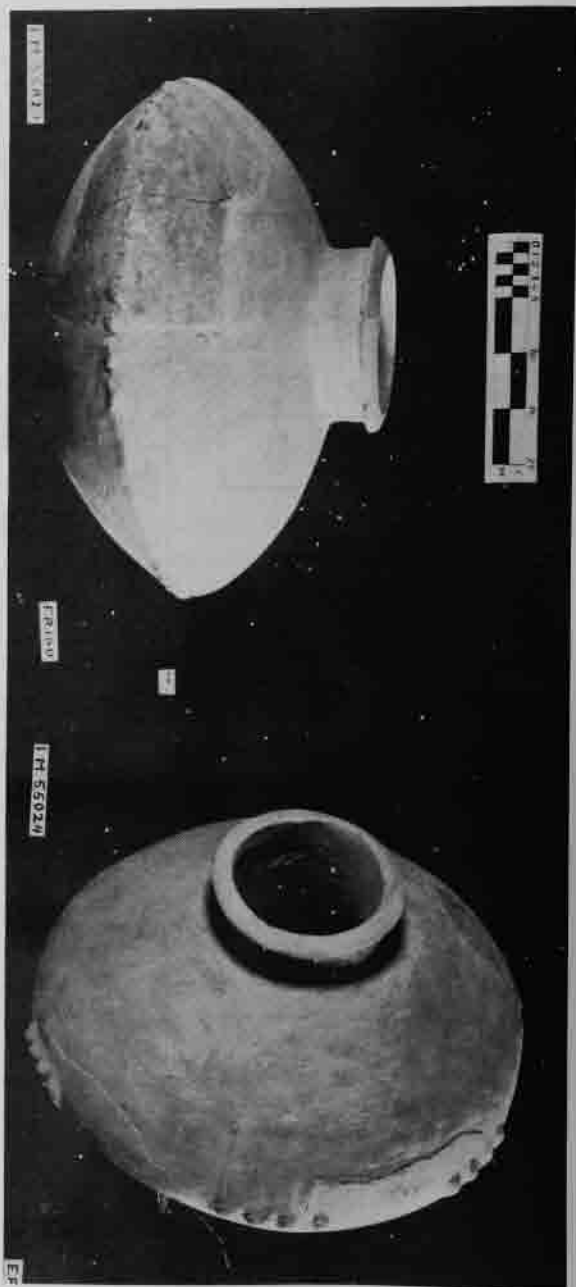


FIG. 109



FIG. 110

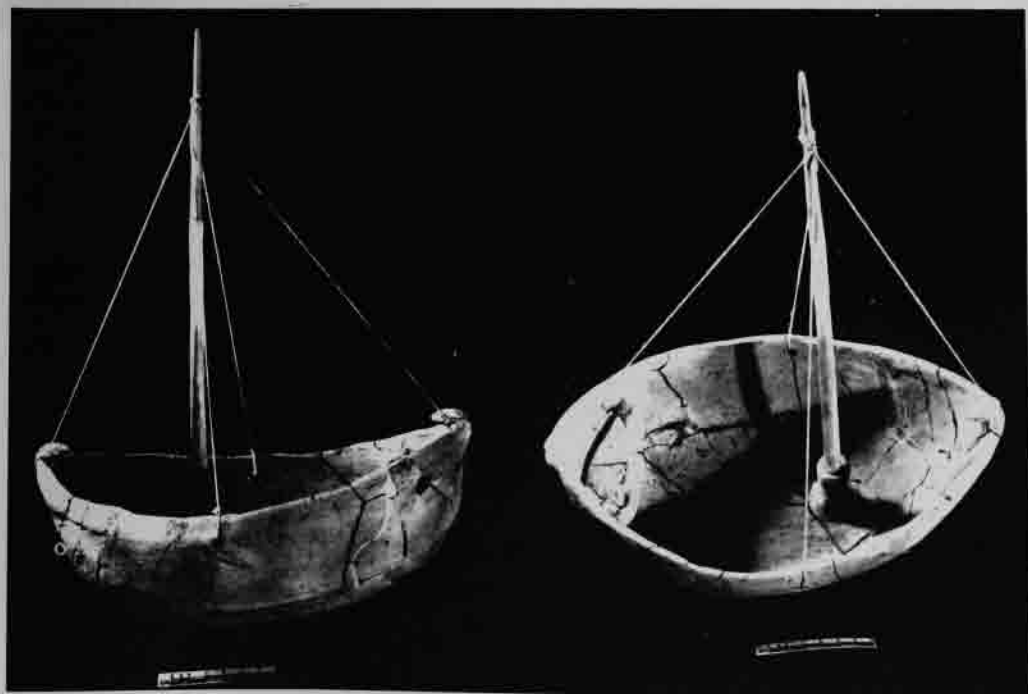


FIG. 111

With the exception of the pottery bottle which is standing inside the dish, the other vessels in Figs. 112 & 113 are all in stone. With the exception of the dish and the shouldered jar (bottom right) these stone vessels and the clay bottle were found in various places in between the burials and are not easy to date but mostly of late Ubaid period. The dish, and the shouldered jar together with a limestone mace head were the funerary provisions in burial no. 21 (see Fig. 62) which is thought to be of Uruk period. Beginning with the left top row, in Fig. 112, these vessels are:

1. Large-mouthed jar in reddish grey stone with white veins, 10 cm. high (IM. 54916).

2. Cylindrical vessel in whitish marble, with out-flaring rim, 19 cm. high (IM 54921).

3. Vessel with flat rim, in yellowish marble with whitish veins, 17.4 cm. high (IM. 54920).

4. Bowl in greenish stone with white veins, 10.3 cm. high (IM. 54914).

5. Jar with short neck, and outstretched base, 9 cm. high (IM. 54918).

6. Tube-like cup in veined alabaster, 10.5 cm. high (IM. 54917).

7. Dish in grey stone, 20.6 cm. in diameter, 3.5 cm. high (IM. 54913).

8. Bottle in fine pale ware (see type 14 in the chart of Fig. 72) is late Ubaid, 13 cm, high, 9 cm. wide (IM. 54903).

9. Small jar in grey stone with blackish veins, 6.5 cm. high (IM. 54922).

10. Shouldered jar in dark grey stone with white veins, 11.1 cm. high (IM. 54919).

In Fig. 113 are drawings of the stone vessels, described above, and also of three others no. 8, 10 and 12. No. 8 is in greyish stone 7 x 4 cm. No. 10 is of an unusual shape, in buff clay covered with reddish chocolate paint, round mouth, with four convex sides. From the area of the cemetery outside burials, 12.5 x 4 cm. (IM. 54910). No. 12 is a mace head in white marble found in burial no. 21, 6 x 4.2 cm. (IM. 54923).

A very interesting relief is found on a fragment of an alabaster bowl with inverted rim, Fig. 114. This relief represents in a heraldic design two lionesses standing opposite each other on their hind feet, and clashing one of their forelegs against each other, with the head turned backward and the tail curved upward. It is picked from the surface of the cemetery (IM. 54940), and probably dates to the Uruk period, 9 cm. high, 11 cm. long.

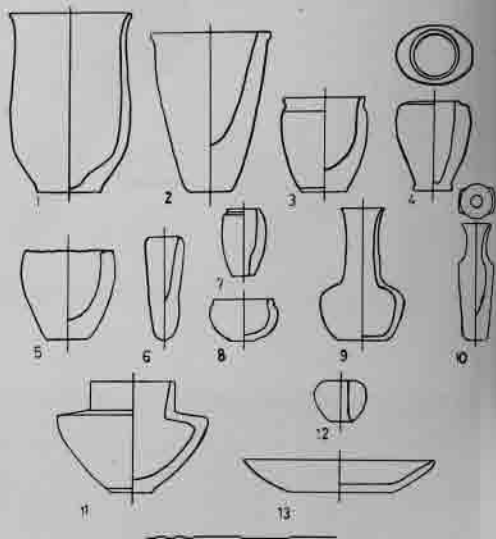


FIG. 113



FIG. 112



FIG. 114

E. 334



٢٨ - ٥١٦٥٥

Several terra-cotta figurines were discovered in the excavations; the most outstanding among them is the complete nude male figurine (Fig. 115 a & b) which was unearthed in burial no. 68 near the left shoulder of the buried woman. This type of figurine is known to us particularly from Ubad and Ur, in the same slenderness of the body, the queer studs on chest and shoulders, the lizard face with slanting eyes, and the conical arrangement of the hair in bitumen black⁽⁵⁵⁾.

These figurines belong to the Ubad period, and are generally female, considered previously to represent the mother goddess. But the figurine from Erdu has special importance; it is the only complete one known of a male figurine. His hands are placed on his belly, and at the same time he is holding a mace or a stick in his left hand. It is in pinkish buff ware, 14.4 cm. high (IM. 54931).

55: Woolley, *Uj Excavations 4. The Early Periods* (British

Museum, 1935), plates 20-22.

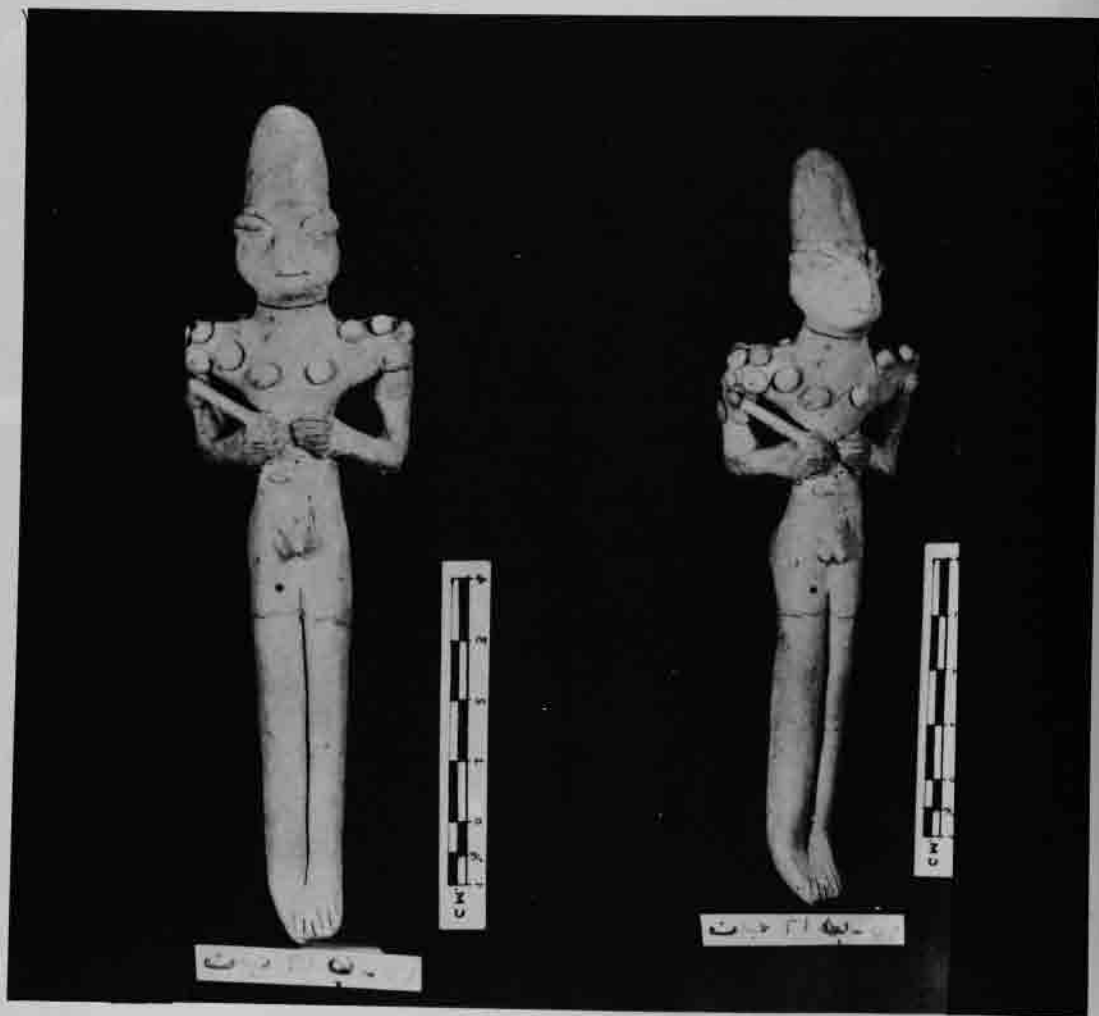


FIG. 115 A



FIG. 115B

Among the other figurines shown in Fig. 116, are three, which, although in fragmentary state, have special importance for the difference they show from Ubaid figurines, because they were found in pre-standard Ubaid levels. They are no. 6, 7 and 8 in the following list. The last two are in fine pinkish buff clay.

1. The upper part of a female figurine, with prominent chest. The face is of lizard type but the black wig? is lost. It is in greenish buff ware, 5.8 cm. high, found near the surface of the cemetery (IM. 54933).

2. Similar to no. 1, but with less prominent chest, 4.5 cm. high, found near the surface of the cemetery (E. 340).

3. Male figurine described above.

4. The upper part of a female figurine in reddish buff ware with studs on shoulders, 8.1 cm. high, found in an Ubaid house to the east of the cemetery (IM. 54932).

5. Female figurine; head, feet and hands are lost. It is 10 cm. high, found at the surface of the cemetery (IM. 54939).

6. The upper part of a female? figurine found in level XIV of the pre-Ubaid period yet it has the portrait of the later developed lizard face figurines. The hands and legs are lost but there are indications that the hands were placed on the waist; the top of the head is hollow. There are in black two lines around the neck and dots on the belly. It is 7.5 cm. high, 5.5 cm. wide, and only 1.4 cm. thick (IM. 54935).

7. The lower half of a figurine in slightly pinkish buff ware, showing traces on the waist of the attachment of the right hand. The upper and lower parts of this fragment are painted in black with a horizontal line and wavy vertical wide lines; the whole may represent a striped dress. Found in level XII (Temple XII?); 9.3 cm. high, 1.8 cm. wide (IM. 54936). It is certainly not nude because there are black lines of the dress rising above the remaining lower part of the belly.

8. The lower half of a figurine in pinkish buff ware also showing horizontal and wavy vertical lines in black paint which represent a striped dress. Found in Temple XVI; 7.6 cm. high, 2.4 cm. wide (IM. 54934).

9. The middle part of a female figurine in greenish buff ware, found in the Ubaid deposit in which the burials of the cemetery were later sunk; 5.5 cm. high (E. 338).

10. Head of an animal, with details possibly of a camel, made in bitumen, found in the cemetery, 2.9 × 1.8 cm. (IM. 54938).

11. A figurine of a dog in greenish buff clay, found in Temple IX, the body is decorated with black stripes, 10 cm. long, 4.5 cm. high (IM. 54937). The feet and the end of the tail show breaks, indicating that this figurine was decorating a large pottery vessel.

12. A fragment of what looks like the striped back of another animal, in greenish buff ware, found at the surface of the cemetery, 8.5 × 3.3 cm. (E. 333).



1



2



3



4



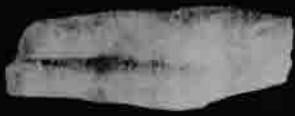
5



6



7



8



9



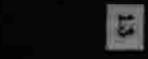
10



11



12



13

The small finds of other types are shown in Figure 117. They are:

Nos. 1-4 are spindle whorls in buff clay. No. 1 has an indented edge. They are found in Temple IX.

No. 6 is earlier in date found in Temple XIV, also indented, but more like a disc, 3.7 cm. in diameter (IM. 55011).

Nos. 7-10 are celts in stone, among which nos. 8 & 10 in greyish stone were found in Temple VIII, while no. 9 in reddish stone was found in Temple IX, 5.7 cm. (IM. 55009).

Nos. 13-24 blades in flint and obsidian found in Temple VIII.

No. 25 a point in bone. 12 cm. long there are traces of bitumen near the lower end, found in Temple VIII.

Nos. 26, 36 & 39 are chopper axes in stone, found in Temple IX. No. 26 shows traces of a handle in bitumen.

No. 27, A bead in shell.

Nos. 28 & 38 the first is a stamp seal in frit perforated at the back, incised probably with a picture of insect (IM. 55010). No. 38 is a part of a small vessel in black obsidian with pointed bottom, 4.5 × 3.7 cm. (IM. 52341). Both objects were found in Temple VII.

No. 29, spindle whorl.

No. 30 fragment of a vessel in black obsidian, with round rim.

No. 31 a pendant in veined marble, in the form of a human seated figurine, extremely simplified, both shoulders perforated, 4.5 cm. high, found in Temple VI (IM. 52318).

No. 32 a group of 13 beads of various shapes and types of stone, found in the central Hall of Temple VI, six of which are long beads in red carnelian of different tones, two discoid in carnelian, three in bluish frit, and the other two in white marble. (IM. 52317).

No. 33, two beads, one in frit perforated longitudinally, 1.4 cm. long. The other is in obsidian perforated at the end 1.7 cm. long. Both found in Temple XI.

No. 34, a flint implement.

No. 35, a nice bead in greenish stone perforated longitudinally, carefully decorated with incisions and engraving with five leaves inside a frame of herring bone pattern, found in Temple IX, 5.3 × 2.5 cm. (IM. 55007).

No. 37, a large chopper axe probably used at both ends, in reddish stone, found in Temple VIII, 16.7 cm. long (IM. 55004).



FIG. 117

C. Architectural Ornament

The architectural ornamental objects shown in Figs. 118 and 119, were collected during the excavations of the protoliterate temples especially in the process of uncovering the two stepped faces of the platform of Temple I. They are mostly cones of various sizes and different materials, and slabs of stones of various colours, both from decorative friezes of that temple. Nevertheless the wide scale tunnelling which took place before the time of Amar-Sin in the protoliterate temples situated underneath the ziggurat, resulted in the mixing of these ornaments from various buildings. Thus the *riemchen* bricks in gypsum shown in the upper row of Fig. 118 and the fine baked clay nails in the lower row, do not belong to Temple I but to a later protoliterate building probably of Jamdat Nasr period. Similar bricks and nails were actually found in the trench dug from the ziggurat to the Portico (Fig. 3) and also in the interior of the ziggurat behind its northeastern encasement wall (Fig. 14).

In Fig. 118 beginning from top left are:

1. Four *riemchen* bricks in gypsum, the second of which shows the impression of a mat on which it was moulded; a brick in over-baked clay; and two slabs of limestone.

2. Mosaic square nails in stones of various colours, reddish, greenish, brown or black; cones in pinkish stone with the point end dipped in bitumen.

3. Cones of larger size made of limestone with the pointed end dipped in bitumen.

4. Large cones made in gypsum, and capped with a thin leaf of copper fixed with bitumen. (Note fragments of copper leaves, placed in front of these cones).

5. Nails in greenish over-baked clay, a curved nail, two curved spouts, potsherds.

Fig. 119 illustrates generally the types of bricks and slabs used in pre-historic buildings mostly of proto-literate period. In the middle top are plano-convex bricks with a finger mark, found near the east corner of the ziggurat. The *riemchen* gypsum bricks and the perforated baked clay bricks belong to building remains found underneath the Amar-Sin ziggurat. In the centre are triangular architectural ornaments in baked clay with the flat end painted black with bitumen which were probably originally ornamenting columns of Temple I. In the foreground are fragments of slabs of stone perforated at the back for fixing them for decoration.



FIG.118 ▲

FIG.119 ▼



D. The Lion of Eridu

A lion in basalt was found buried in wind blown sand, outside the mound of Abu Shahrein, at about 15 m. from the NE side of the city wall on the line of the direction of the SE side of the ziggurat (Figs. 120 & 121). It was seen by Taylor in the middle of the last century and placed on the map which he drew for the ruins. He saw it lying on the surface of the mound outside its northeastern retaining wall. An attempt was made in 1911 to remove it, but it was given up, after rolling it to where it was uncovered. Fragments of a second lion are still scattered near the eastern corner of the mound, among which the only fragment showing carving is the part of the mane which is published by Campbell Thompson.

This lion is made from a roughly prepared prismatic block of hard stone. Its height is 164 cm. maximum width 70 cm. the distance from the bottom of the lower jaw to the top of the head is 50 cm.

It is sitting upright on its haunches. The tail is carved against the right side with a curly end. The eyes and the mouth are deeply carved in. Of the teeth only the canines are represented (Fig. 121). The moustache is lavishly depicted by wavy lines, and the mane is represented by large curls on both sides of a line running down the back, and also in front of the neck. The general outlook of this statue is of an efficient guardian lion, probably one of a pair flanking the gate of the city or the entrance to a main temple, similar in function to the lions of Tell Harmal.

Is the lion of Eridu also of Isin-Larsa or Ur III period, that is to say the work of Nur-Adad or Amar-Sin? It is difficult to date this remarkable statue. Not far from the spot where Taylor saw it, there are buildings of the Uruk period with walls rising to the surface of the mound. Nevertheless one can not escape noticing that the slight squatness and the calmness are in a style characteristic of the Neo-Sumerian art which is best revealed in the statues of Gudea.





FIG.120f



FIG.120c

FIG. 121 ▶



CHAPTER 7
THE HUT SOUNDING

A. EXCAVATIONS

For the purpose of testing the central part of the acropolis, and in order to correlate and confirm the stratified results reached in the previous season where the prehistoric temples were uncovered, a square area 7 x 7 m with the corners oriented toward the cardinal directions was chosen on the acropolis at about 80 m. to the south-east of the ziggurat (Fig. 3, No. 6).

Fourteen stratified levels were discovered, some of which have more than one floor, all belonging to the post-Qalaf Hajji Muhammad phase of the Ubaid period (Figs. 122 & 123). These levels could be divided into two groups separated by a hiatus (Level IX). The upper group Levels VIII-I, which forms an accumulated debris of approximately 4.0 m. (measurements are taken from the top of the west corner), presents materials of the latest phase of Ubaid culture and corresponds to Temples VII & VI and the cemetery. The lower group of levels in the Hut Sounding, Levels XIV-X, produced materials of standard Ubaid but in its early part, since reminiscences of the fine ware of Hajji Muhammad occur. This group of levels is contemporary with Temples XI-IX. In the three levels XII-X were uncovered remains of huts with reed walls plastered on both sides with a thick layer of clay, making altogether a width of 15 cm. It is because of the existence of these remains, the earliest known of their kind in Iraq, that the designation of Hut Sounding is given to the excavation. All the five levels of the lower group were found buried in pure greenish blown sand, making altogether a height of approximately 2.50 m. The lowest of all levels, Level XIV (and also Level XIII) had no

building remains. It rests on a ground of pure greenish sand which slopes slightly from west to east (Figs. 124 & 125). The highest point of this sandy virgin soil is approximately one metre higher than the flat plain extending in the east outside the acropolis. Excavation continued beneath Level XIV to a further depth of four metres without encountering any indication of archaeological evidence not even ashes (see NW section in Fig. 124). All this depth was in pure greenish sand similar to the sand found at a depth of 4.60 m. (from surface of the plain) in a well dug near the house of the expedition which was built at a distance of 300 m. to the northeast of the Hut Sounding. In other words the sandy virgin soil in the Hut Sounding is 5.60 m. higher than the sandy ground in the well. Water appeared in the well at a depth of 5.30 m. from the surface of the plain, indicating that water could have been reached in the Hut Sounding if digging had continued for further depth of 2.30 m.

The thin wall of the hut 10-15 cm. thick in Level X, was found still standing to a height of 70 cm., buried to the top with pure sand (Figs. 122 & 123).

One of the interesting discoveries is that the baked clay sickles are found only in the upper levels (Type 32 in Fig. 72), indicating probably that the lower group depended more upon fishing and hunting birds rather than upon agriculture. This probability is confirmed by the existence of several net sinkers and also the accumulations of fish bones in the lower levels (see the chart in Fig. 127).





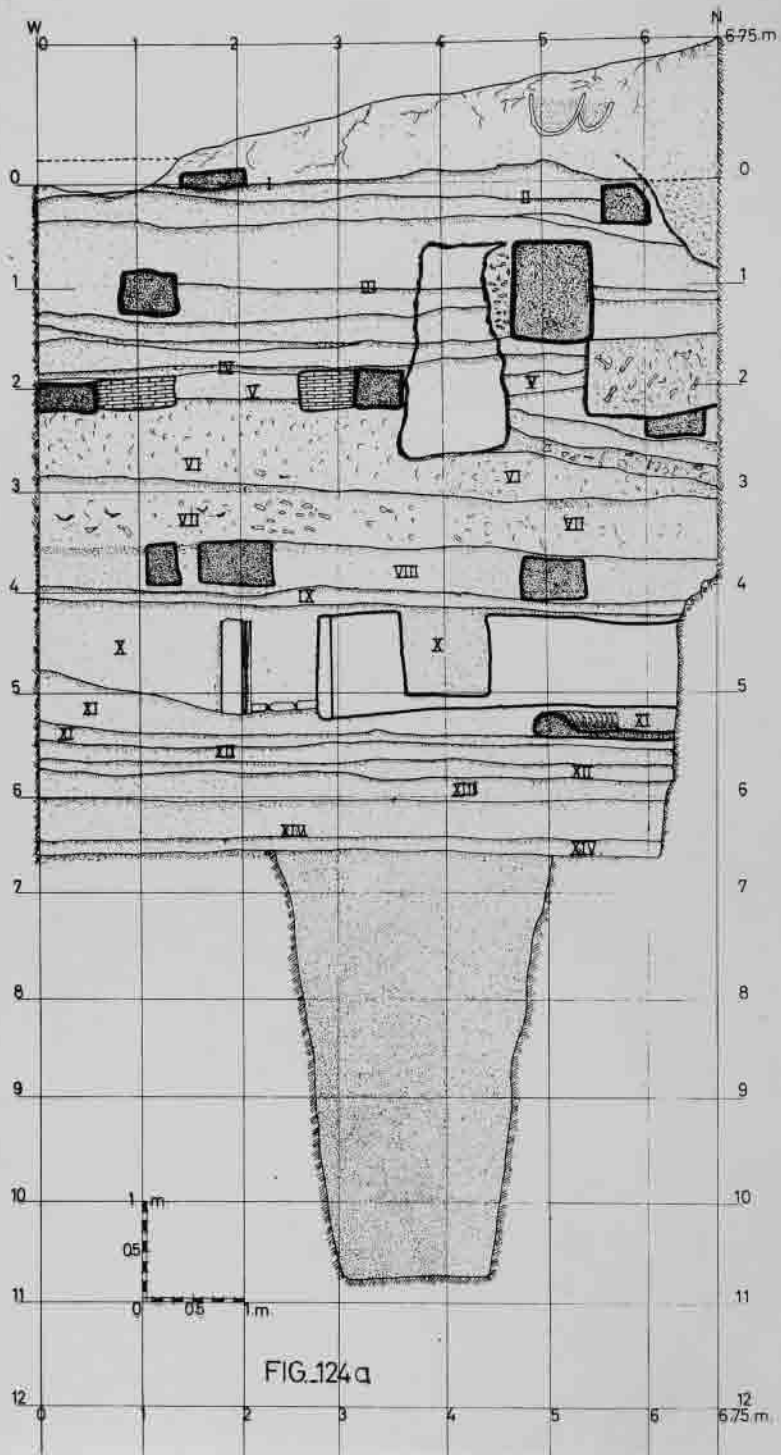


FIG. 124 A

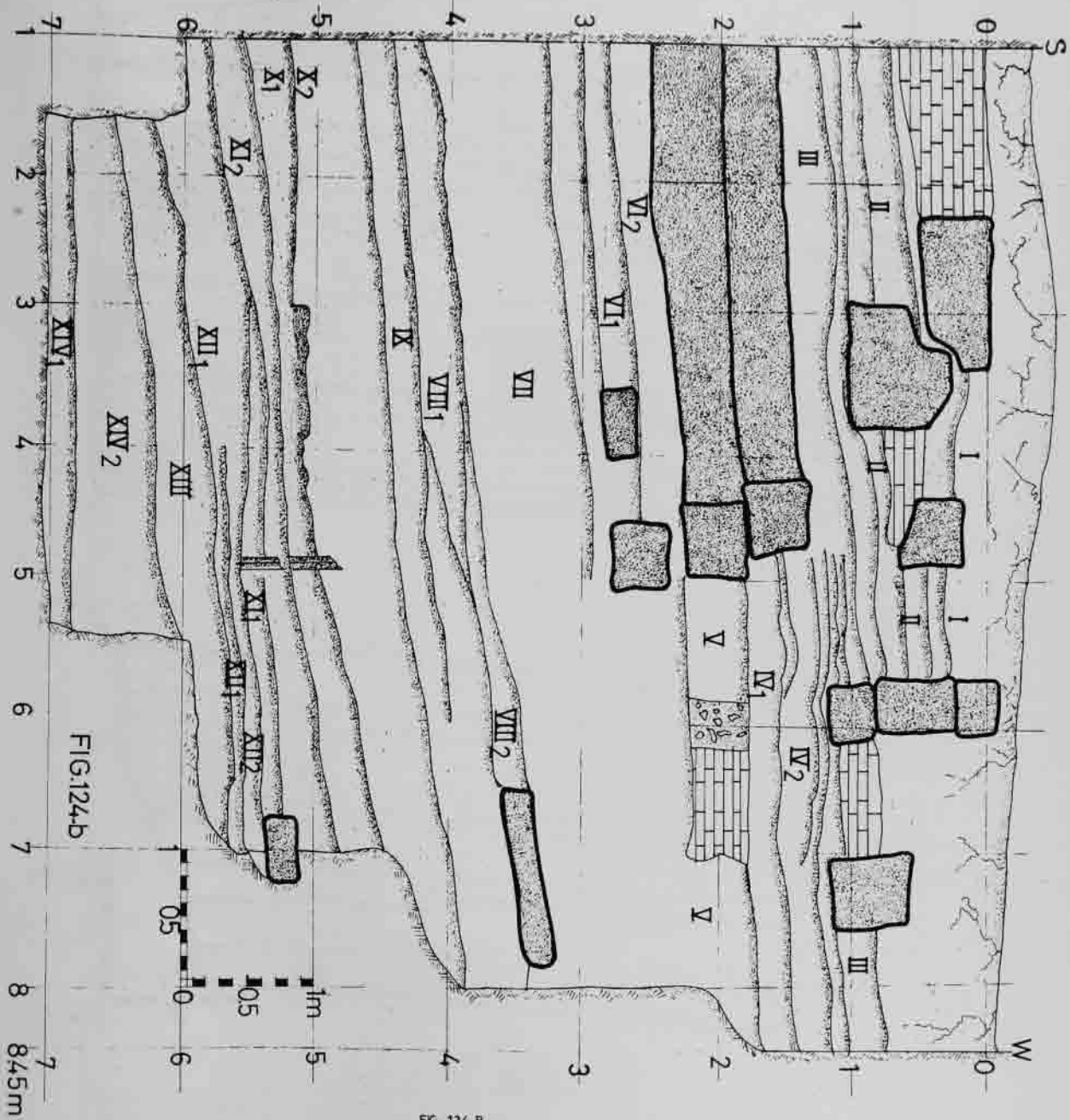
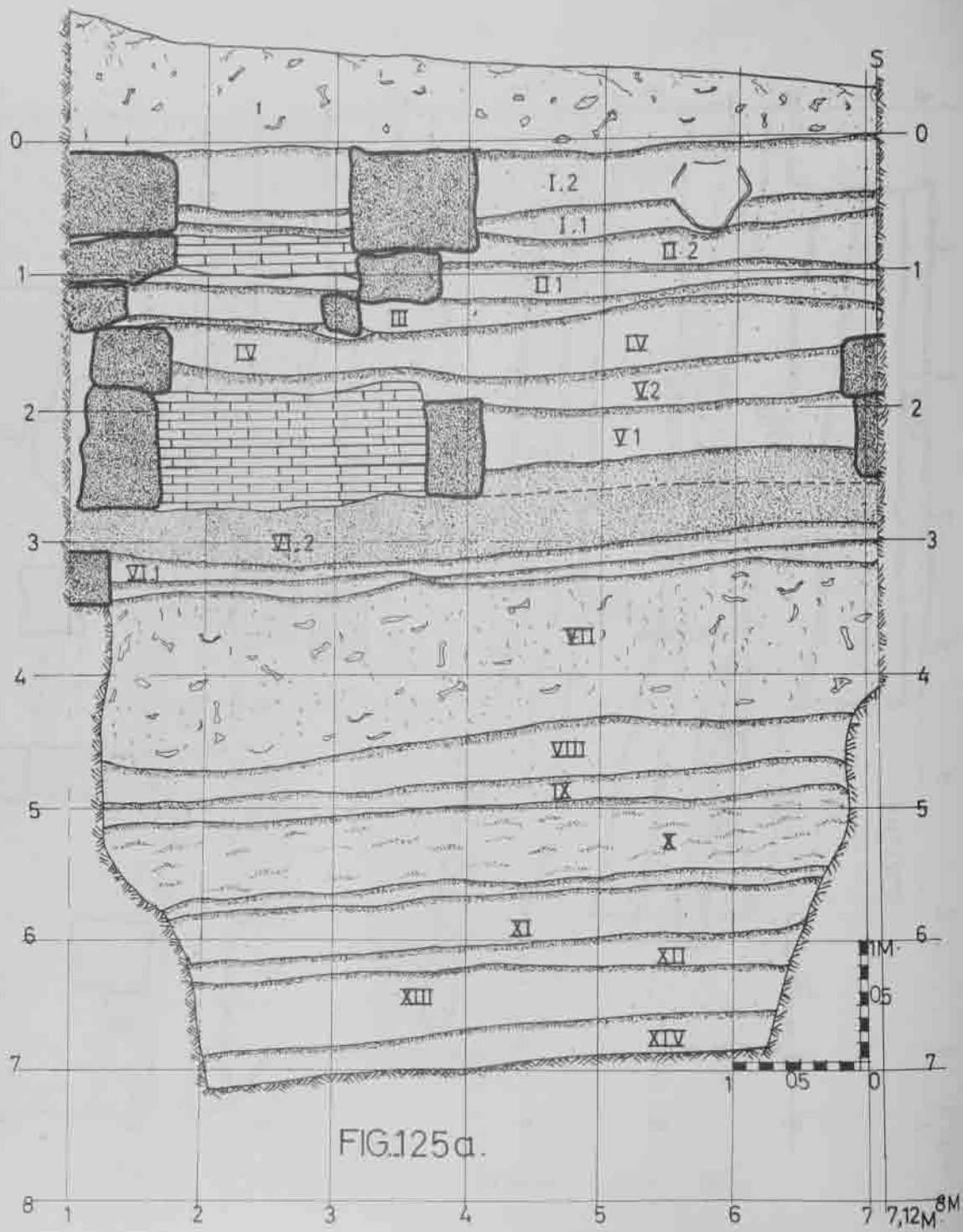
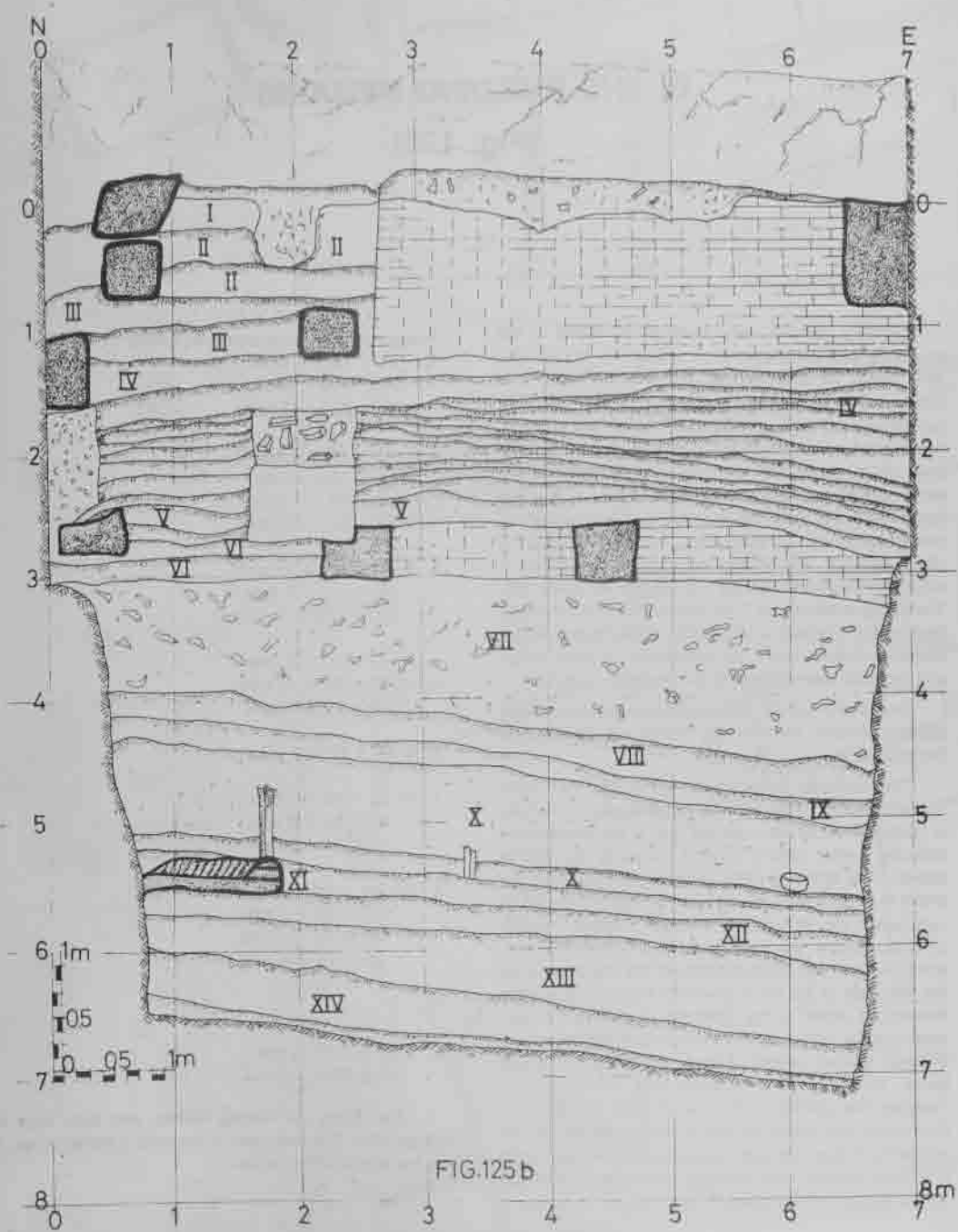


FIG. 124 B





B. THE BUILDING REMAINS

(Fig. 126)

Building remains were found in all levels of the sounding with the exception of Levels VII, IX, XIII and XIV. Level VII is a deposit of rubbish of clay, ash, potsherds and bones, possibly brought from the neighbourhood and thrown over Level VIII, for the preparation of extended flat ground for Level VI. It is quite thick, being 135 cm. thick at the east corner, while only 60 cm. at the west corner. Level IX is a thin layer 15-20 cm. thick, representing an abandonment of unknown duration, separating the two phases of Ubaia cultures, and sealing the remains of a period in which wind blown sand filled and covered the levels XIV-X one after another (see Figs. 124 & 125). This thin hiatus layer which is devoid of potsherds, is dark brown slightly reddish in colour, due to its composition of blown ashes and probably also of decomposed organic materials.

Levels XIV and XIII consist of floors of ashes without building remains, and with only the few objects shown in the chart of the finds (Fig. 127).

The other ten levels (Levels XII-X, VIII, VII-I) each had architectural remains. With the exception of the huts in Levels XII-X, all the walls are built in sun dried bricks and clay mortar; walls in Level X are partly also built in bricks.). The following table gives the dimensions of the bricks in each level, while its bond is shown at the lower right side of Fig. 127. Worthy of notice is that all the walls in these levels are running in the same directions, almost without any basic change, so that the direction of the thin walls of the hut in Level XII, the earliest building remains, is similar to the directions of walls in the later levels above, indicating that there is continuity of culture between the two groups of levels which are above and below level IX. It is obvious that the prehistoric Temples had possibly influenced by their location and orientation, the whole lay-out of the settlement on the acropolis, through the ages. It is noticeable also that there is a street running from northeast to southwest in almost all the levels; indicating again the continuity of culture

Measurements of the sun-dried bricks:

L. I	27 × 19.5 × 8 cms.
	28.5 × 19 × 8 cms.
	30 × 20.5 × 8 cms.
L. II	41 × 18 × 8 cms.
	42 × 18 × 8 cms.
	42 × 20 × 7.5 cms.
	42 × 20 × 8.5 cms.
L. III	44 × 25 × 7.5 cms.
	43 × 21 × 7 cms.
	41.5 × 20.5 × 7 cms.
L. IV	47 × 25 × 6 cms.
	42 × 25 × 10 cms.
	47 × 26 × 7 cms.
L. V	47 × 22 × 7 cms.
L. VI	49 × 23 × 8 cms.
	48 × 26 × 8 cms.
	47 × 26 × 8 cms.
L. VIII	58 × 15 × 8 cms.
	53 × 15 × 8 cms.
	48 × 15 × 8 cms.
	22 × 15 × 8 cms.
L. X	30 × 12 × 8 cms.
	30 × 28 × 8 cms.

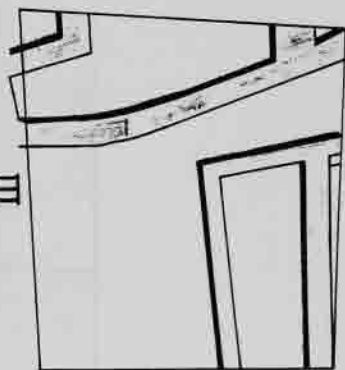
The bricks are oblong always, and fairly large in levels VIII-I. The thickness of the walls is generally equal to the length of the bricks.



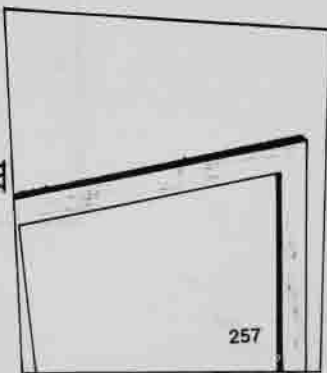
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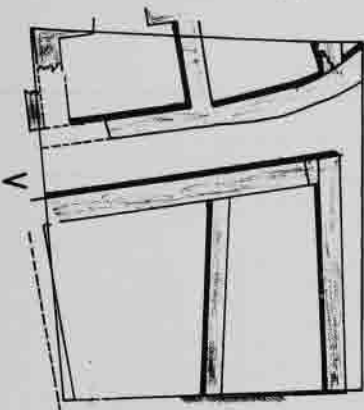
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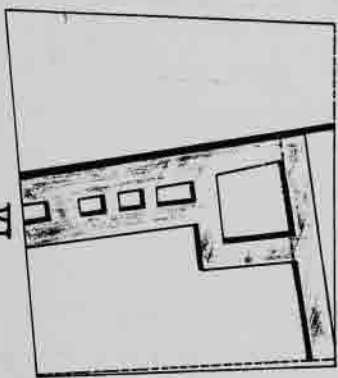
III



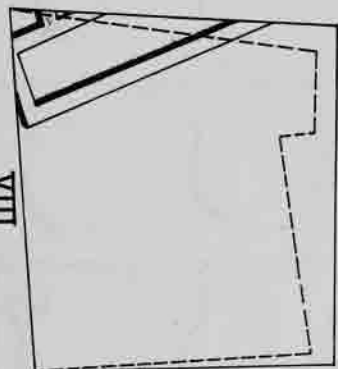
IV



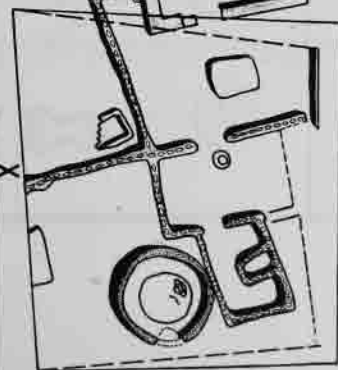
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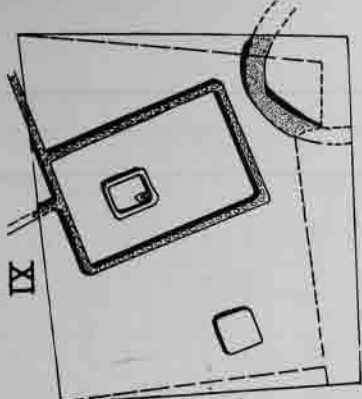
VI



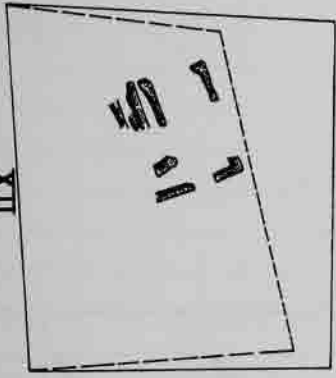
VII



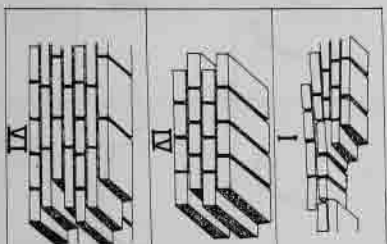
VIII



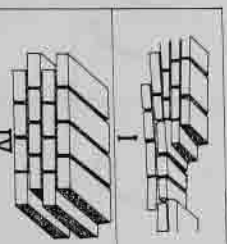
IX



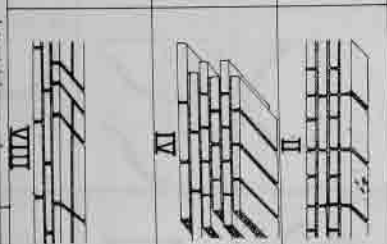
X



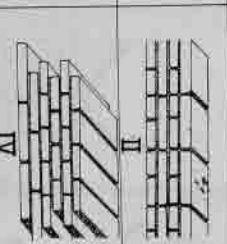
XI



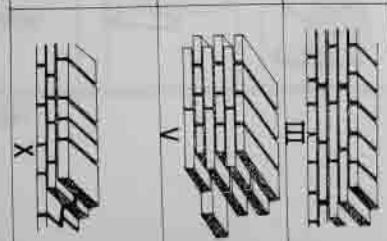
XII



XIII



XIV



XV

0 1 2 3 4 5 M

0.5 0 0.5 1 1.5 M

FIG. 126

L.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
I	3			1	9	$\frac{2}{6}$	1	$\frac{13}{4}$			15		$\frac{17}{1}$								2	2	2
II	3	1		17	1	$\frac{7}{2}$		$\frac{28}{4}$			26		$\frac{28}{1}$	1	1	7	3	$\frac{4}{2}$		2		2	4
III	2	1		32		$\frac{3}{1}$		$\frac{36}{19}$	4	1	18	3	$\frac{15}{1}$		<u>3</u>	8	1	$\frac{1}{3}$	$\frac{1}{2}$			1	$\frac{2}{2}$
IV		2		15		$\frac{6}{2}$		$\frac{11}{16}$	$\frac{5}{4}$		3	2	$\frac{23}{1}$			3	2	1	$\frac{2}{8}$	2			$\frac{3}{2}$
V	1	<u>1</u>		2	6	$\frac{3}{7}$	1	$\frac{5}{5}$	$\frac{40}{20}$		2	5	$\frac{53}{3}$		<u>3</u>	6		3	$\frac{4}{6}$	2	7	$\frac{2}{2}$	2
VI		$\frac{10}{4}$		6	3	$\frac{6}{18}$			$\frac{152}{89}$		1	7	$\frac{58}{3}$		<u>2</u>	10	1	2	$\frac{25}{16}$	$\frac{1}{1}$	5	$\frac{2}{4}$	2
VII		$\frac{12}{7}$	$\frac{4}{1}$	$\frac{17}{3}$	3	$\frac{2}{11}$			$\frac{105}{53}$	$\frac{3}{11}$		2	10	1		3			$\frac{19}{10}$	$\frac{1}{15}$	1	2	$\frac{2}{3}$
VIII			<u>43</u>						$\frac{36}{4}$	$\frac{28}{5}$		$\frac{1}{2}$	$\frac{2}{1}$			3							$\frac{3}{3}$
IX																							
X												2											
XI												1											
XII																							
XIII																							
XIV																							

1-1	2-2	3-3	4-4	5-5	6-6
12-12	13-13	14-14	15-15	16-16	17-17
23-23	24-24	25-25	26-26	27-27	28-28
34-34	35-35	36-36	37-37	38-38	39-39

FIG.

24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	L.	
$\frac{24}{3}$	$\frac{1}{1}$		$\frac{2}{13}$		10		1	7	1	3	1										I
$\frac{16}{18}$	$\frac{5}{1}$		7		20	2	2	17	6	2	1										II
$\frac{16}{16}$	1		$\frac{1}{2}$		19	1	2	31	5	3	2										III
$\frac{13}{5}$	1			1	22	2		10	7	1	1										IV
$\frac{1}{6}$	$\frac{1}{1}$				16			16			2		1								V
$\frac{25}{22}$	$\frac{2}{1}$	1	1	2	$\frac{1}{34}$	2		20	3	3											VI
$\frac{15}{12}$	4	4	3		$\frac{2}{6}$			$\frac{1}{13}$	8		1										VII
$\frac{2}{2}$		1	3					$\frac{4}{6}$													VIII
																					IX
2								2	2				1			1	1	1			X
								2	5	11			2								XI
1								1	1	2				1		1	1				XII
									1	2				2	1		1				XIII
								2											1		XIV
7-v	8-A	9-A	10-A	11-A																	
18-1A	19-1A	20-1A	21-1A	22-1A																	
29-1A	30-1A	31-1A	32-1A	33-1A																	
40-1A	41-1A	42-1A	43-1A																		

C. The Pottery and stone objects

a) Levels XIX-X

Pottery in the lower levels of the Hut Sounding was very rare, most probably because these levels were buried in wind blown sand instead of occupation deposits. But what remained are either complete or almost complete vessels (Fig. 128). As was mentioned before, these levels were probably fishermen's dwellings which may account for their being poor in pottery.

In Level XIV were found two net sinkers in stone, two nails in baked clay used usually or as a secondary usage as grinder, and a fragment of a large basin in greenish clay, rectangular in shape (Fig. 128, No. 6).

A stone axe, three grinding stones, two net sinkers in stone, and a pottery disc with two holes⁵⁶, were found in Level XIII (Fig. 127).

In level XII we have a complete plain jar (Fig. 128, No. 8), hand made globular in shape, with flaring rim, in fine greenish buff ware and shiny buff slip. It is 38.5 cm. high and 32 cm. wide. The other finds are a stone axe, a pottery bead, a grinding stone, two stone net sinkers, a pottery disc with two holes, and a baked clay nail (Fig. 128).

In level XI, was discovered an oval bowl in brownish buff clay with greenish buff slip, slightly burnished; the mouth is 27.5 × 22.5 cm.; the remaining height is 19 cm. (Fig. 128, No. 7). Other finds in this level are: two perforated oblong stones, eleven net sinkers in stone, five pottery discs with holes (net sinkers), and two nails in clay (Fig. 127).

The last phase of the lower level, Level X, was the richest in finds and building remains. Its pottery consists of a complete bowl, a toy pot, the upper part of two jars, a basin and a cooking pot. The bowl is 22 cm. wide, 18 cm.

high, in fine greenish buff clay, with shiny buff slip, painted on the outside in dark chocolate colour, with a narrow band near the rim and a lower band of a wavy line in between two horizontal lines (Fig. 128, No. 1). The small pot, 4.4 × 3.6 cm. is decorated on the outside in black paint with vertical lines in between two bordering horizontal lines (No. 4). The two jars are unpainted and in fragmentary state. One of them has a vertical neck, 12 cm. high and 16 cm. wide, in greenish clay (No. 3). The other has a flaring neck 14 cm. high and is 28 cm. wide; in fine reddish buff ware with shiny creamy slip. (No. 2). The basin is in greenish clay, rectangular in shape, similar to the one found in Level XIV, part of which is missing. It is 40 cm. wide, 17 cm. high, and the surviving length is 37.5 cm. (No. 6). The cooking pot is 13.5 cm. high, and 19 cm. wide, in coarse porous brown clay tempered with white grits and straw and having two opposite lug handles (No. 5). This cooking pot was found inside a large oven which was round in shape, 2 m. in diameter, and 60 cm. high, sides curving in to a mouth one metre in diameter. It has an opening for inserting the fuel and for ventilation 40 cm. wide, in the eastern side near the bottom (Fig. 128, 122 & 123). As regards the small finds level X produced one stone axe, a pottery bead, a perforated oblong stone sinker, two disc sinkers and a nail in pottery (Fig. 127).

For the lack of the proper shapes and decorations of Hajji Muhammad types, the pottery of Levels XIV-X should belong to a later period in the Ubaid culture, i.e. to the standard Ubaid, but probably to the early part of it, because some of the pottery found in these levels are shiny and in fine ware, reminiscent of Hajji Muhammad ware.

56. Most probably used to tie the ropes of the nets.

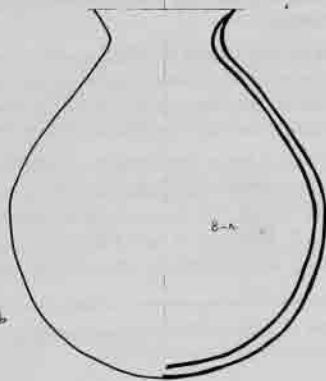
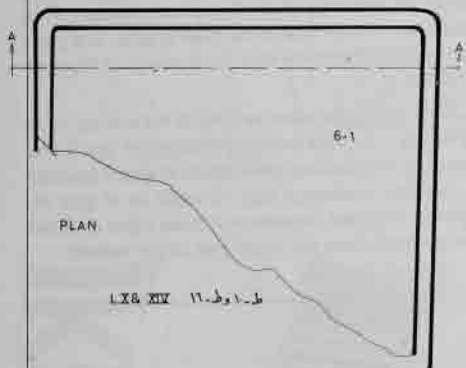
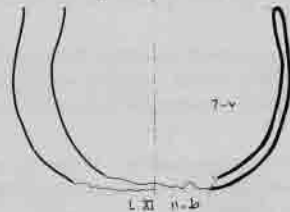
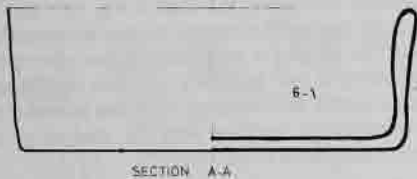
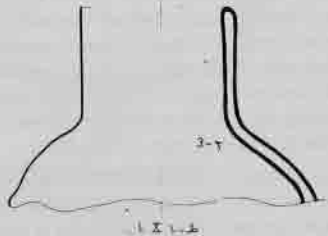
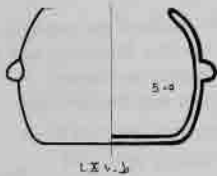
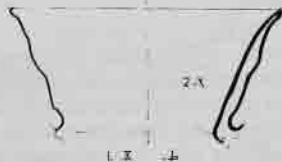
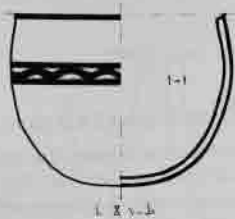


FIG. 128

b. Levels VIII-I

There is generally a consistency in shapes and patterns of the pottery discovered in these levels (Figs. 129-133). It is either greenish buff ware with buff or own slip and painted in black, or buff ware with chocolate paint of mostly dark tone. This latter ware increases in the upper levels.

The cooking vessels of types 11, 16 & 17 (Fig. 127) are unpainted, mostly in coarse reddish clay with black core tempered with straw. The bowl of type 11 appears in level VI and increases in the upper levels. It has a flaring rim and is decorated with nipples. Type 16 which appears earlier, is a cooking pot also decorated with nipples, while type 17 is similar in shape but has a short spout.

The dishes of type 6 and its variation type 7 are mostly in greenish ware, with inverted rim, "scratched inside by a blunt comblike instrument, using a circular movement", and sometimes decorated with a narrow band in black paint either on the rim or below it outside, or in both places. This type is a criterion of the last phase of Ubaid culture.

The dishes of type 8 are similar in shape to type 6 but without scratching. These are generally wholly painted inside in black, also considered a criterion of the late phase of Ubaid.

The dishes of type 9 without flaring rim, are mostly in greenish ware, with plain black paint inside, occurring in great number in levels VIII-V, and continuing in lesser number up to level III. They also belong to almost the last phase of Ubaid and are very frequent in Temples VII-VI and the cemetery.

Beakers of type 13 and its variation with a rim base, type 14, are generally in brownish buff ware with cream or buff slip, generally painted outside, occurring in levels VIII-I. A similar type is found in Temple VI and the cemetery.

Cups of type 3 have open mouths, in greenish ware with buff slip decorated in dark chocolate paint, occurring only in levels VIII & VII. Later it developed into the narrower type 2, and then to type 1 which is unpainted, almost pointed at the bottom, showing outside flint

scraping. The cups of types 2 & 3 occur in the cemetery.

As regards the other objects, the clay sickle appears in Level VIII and continues to Level I (Fig. 127), but in the temples it appeared earlier, beginning with T. XI (Fig. 72). Its absence in the earlier levels of the Hut Sounding, as already explained could be ascribed to a mode of living depending on fishing and fowl hunting. The baked clay nails which appear in T. XII, occur in the Hut Sounding right in the earliest bottom (L. XIV) and continue to the latest level.

In conclusion the results of the previous comparison in pottery between the Hut Sounding and the Temple sounding are approximately as follows:

- L. I-VI are contemporary with the cemetery
 - L. III-VIII are contemporary with T. VI & VII
 - L. IX (Hiatus) contemporary with T. VII
 - L. X-XIV contemporary with T. IX-XI
- Late Ubaid
Standard Ubaid

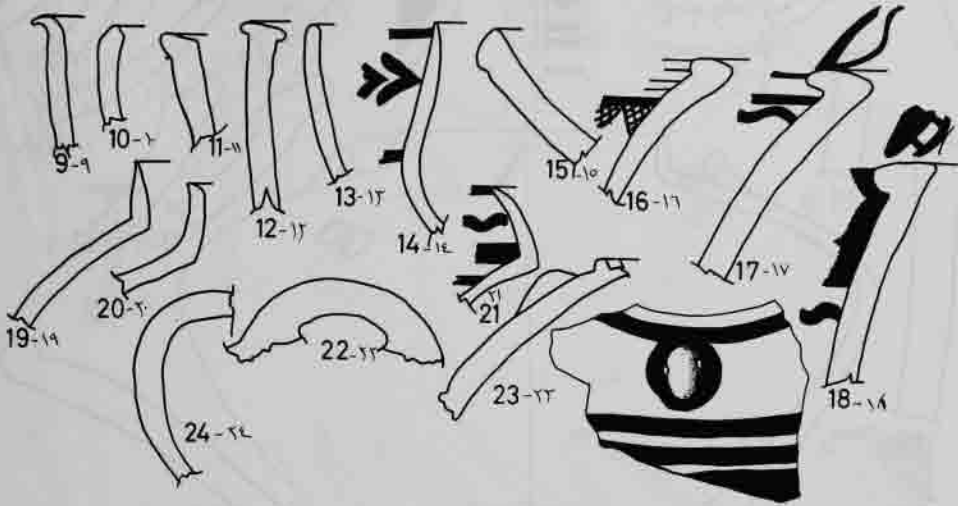
The following points should be taken into consideration concerning the chart in Fig. 127, and the drawings of potsherds according to their levels in Figs. 128-133. The drawing of the potsherds, their description, the numbering of their frequency, and their classification into types, all was accomplished in the field in 1949 in the field note-book⁵⁷, together with the drawing of the designs of decoration in Fig. 134.

1. In a few cases the drawings of some types were not repeated in every level, such as spouts, lugs, small rims and bases, because they were found in small fragments, the drawings of which would not be clear. Thus the frequency of each type in the chart is wider and gives more complete information than the drawings of the types in each level.

2. Ring bases recorded as type 29 in the chart could belong to type 5 or 14 or even to the dishes of type 9. For this reason, in the statistics some bowls of type 4 could be type 5, and the beakers of type 13 could be of type 14, because the recorded frequency of these types is based on sherds mostly from the upper part of the vessels.

57. With the exception of Level VIII whose potsherds were only classified and counted but not drawn in the field.

L.VI 7-b



L.VII v-b

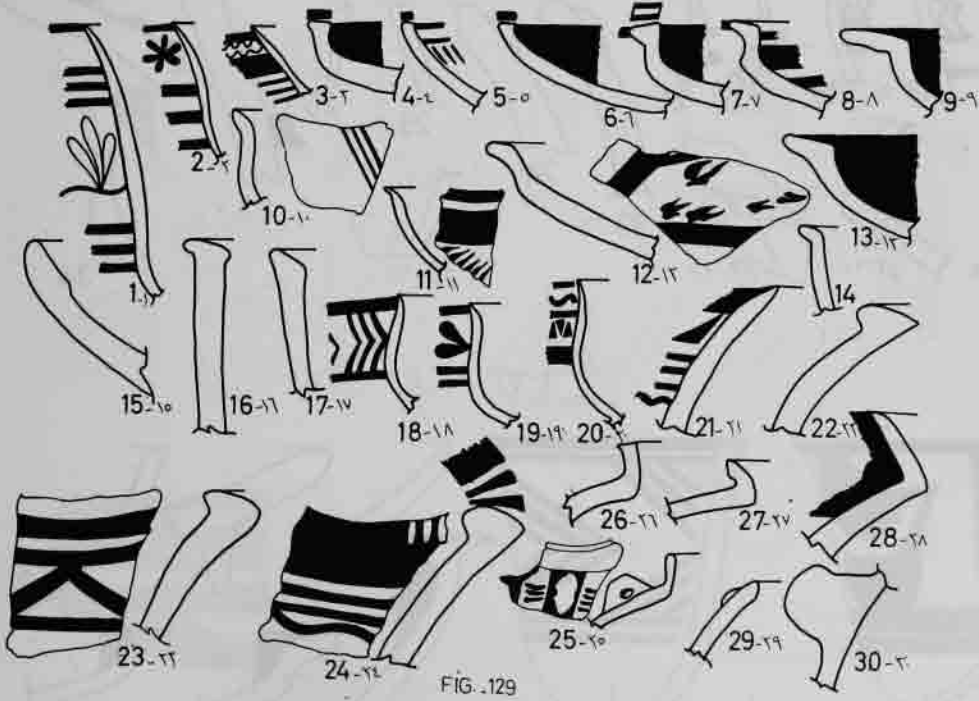
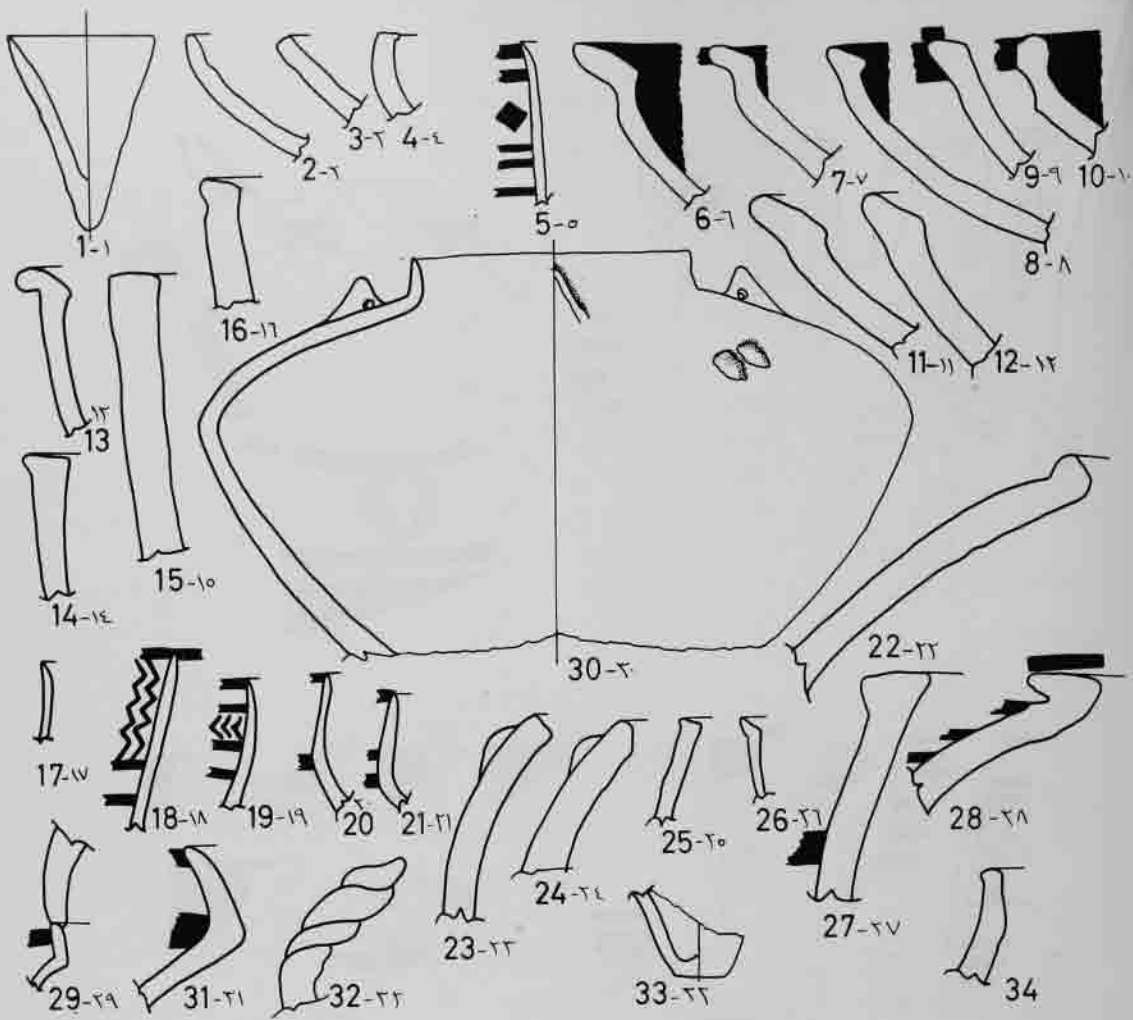


FIG. 129

L.V 0-b



L.VI 7-b

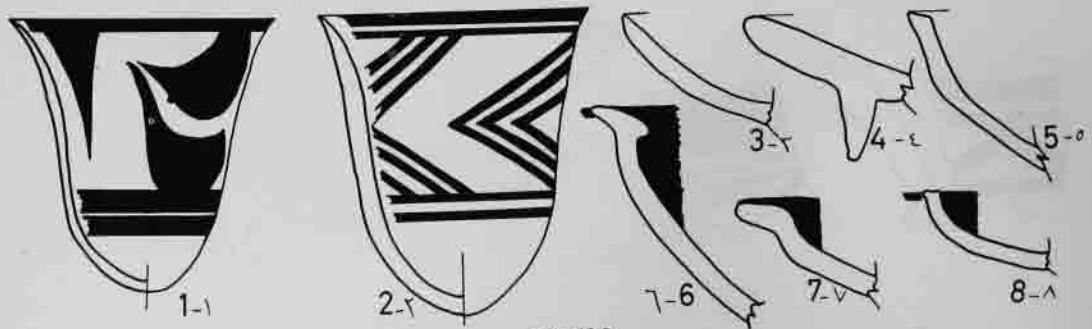
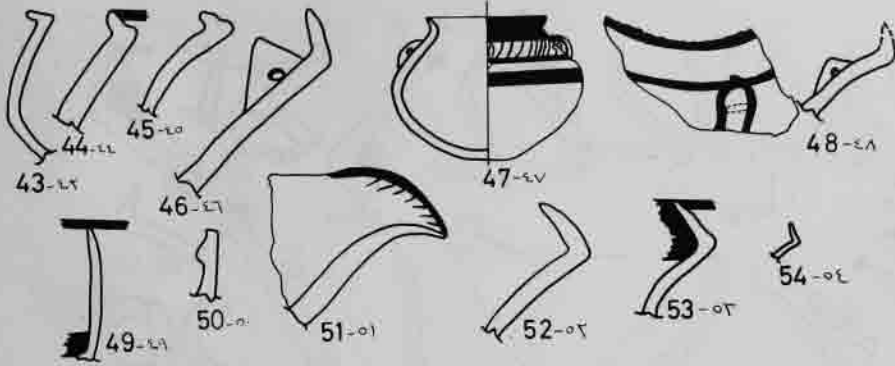


FIG. 130

L.III



L.IV ط-ع

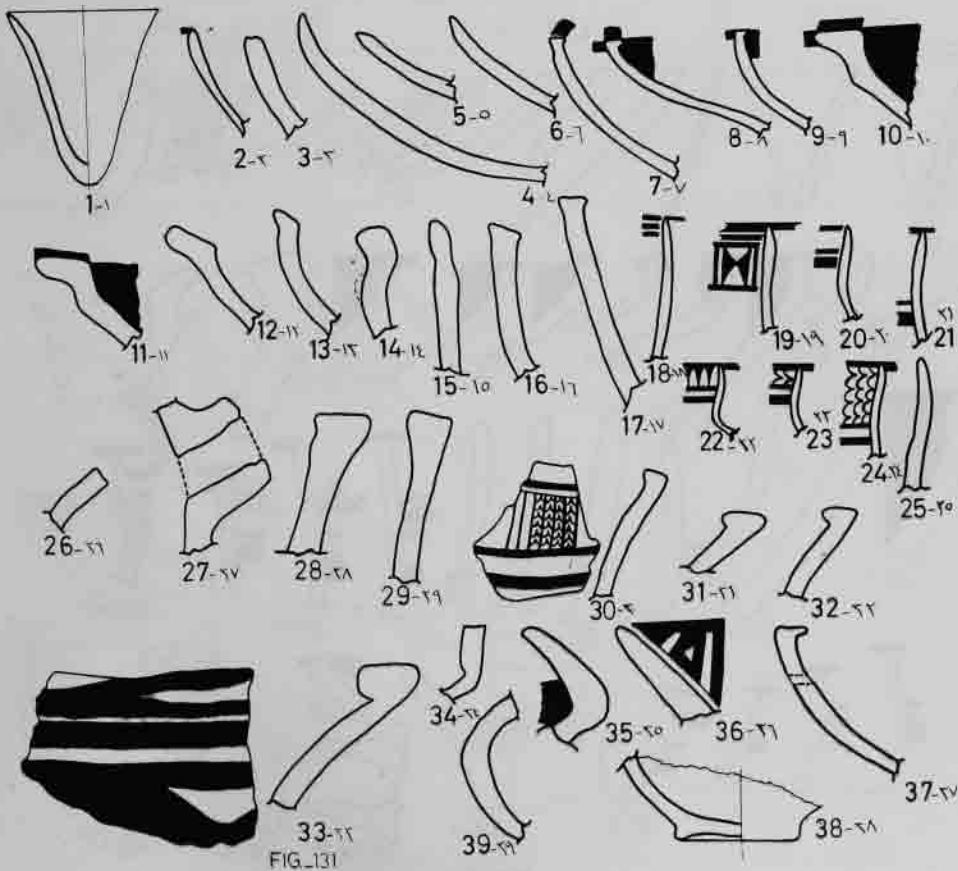


FIG. 131

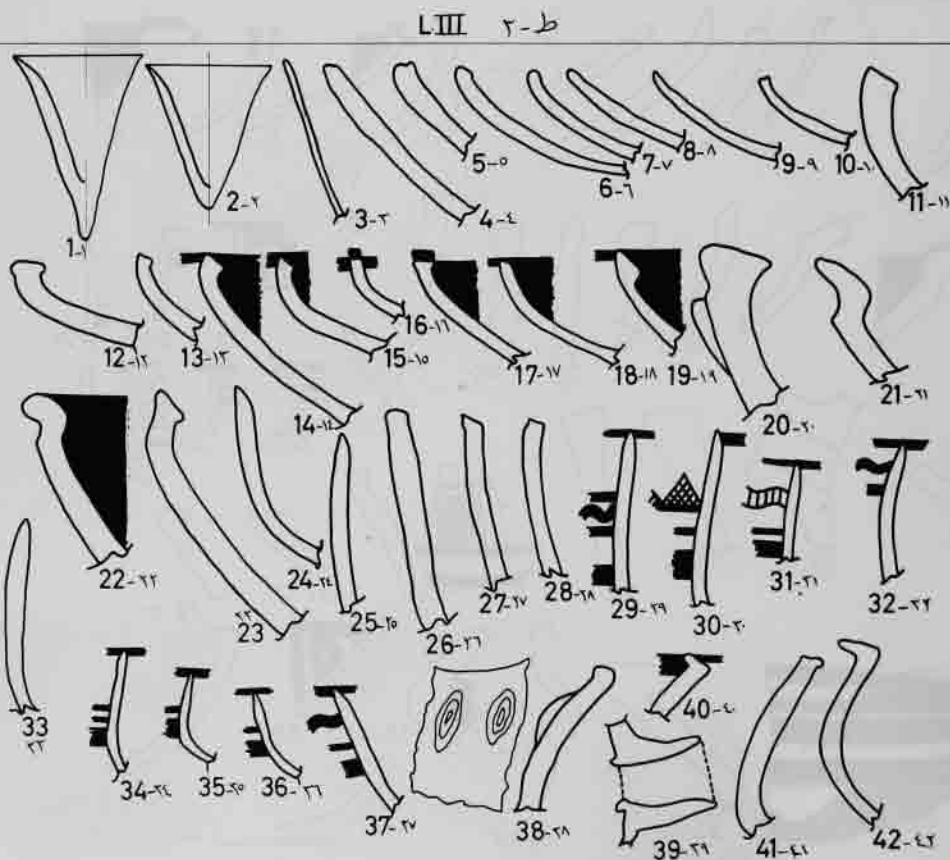
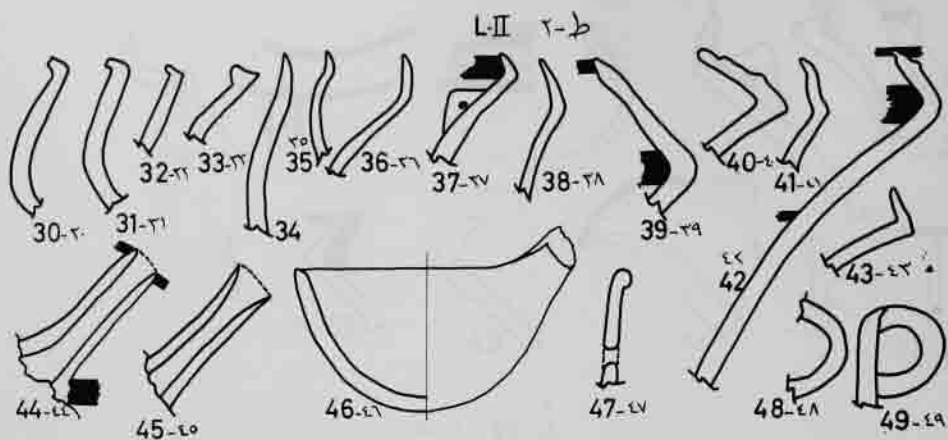
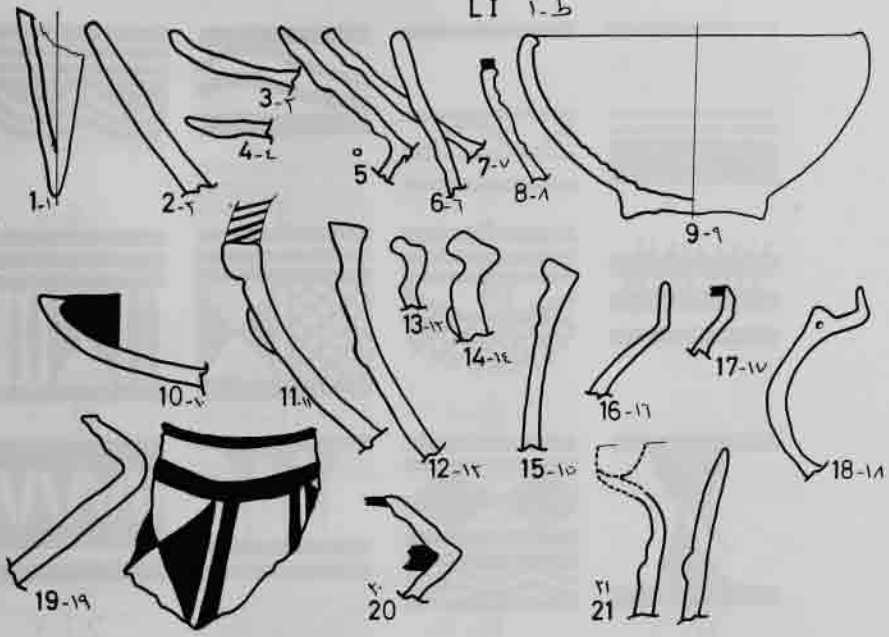


FIG. 132

LI 1-b



LII 2-b

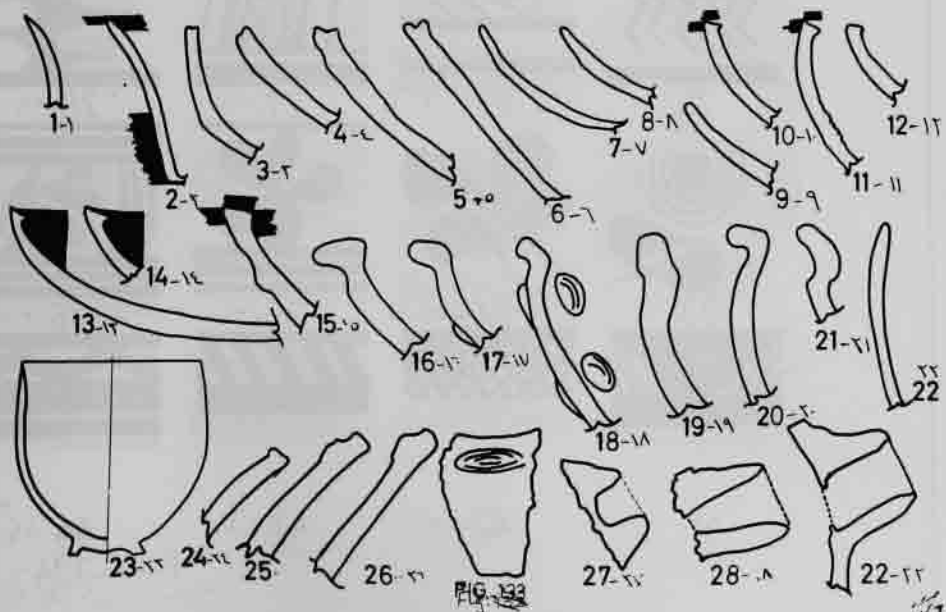


FIG. 133



41-

42-42

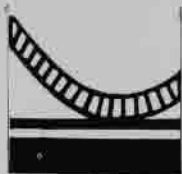
43-43

44-44

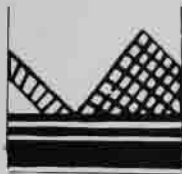
FIG 1-134



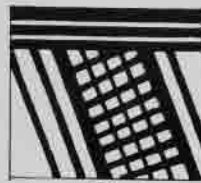
5-0



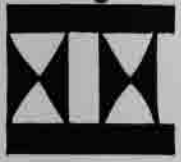
6-1



7-5



8-8



13-12



14-14



15-10



16-17



21-21



22-22



23-22



24-22



29-29



30-20



31-21



32-22



37-27



38-28



39-29



40-28



45-20



46-26



47-27



48-28

حفرة الأكوخ

CHAPTER 8
THE PALACES

A. The North Mound

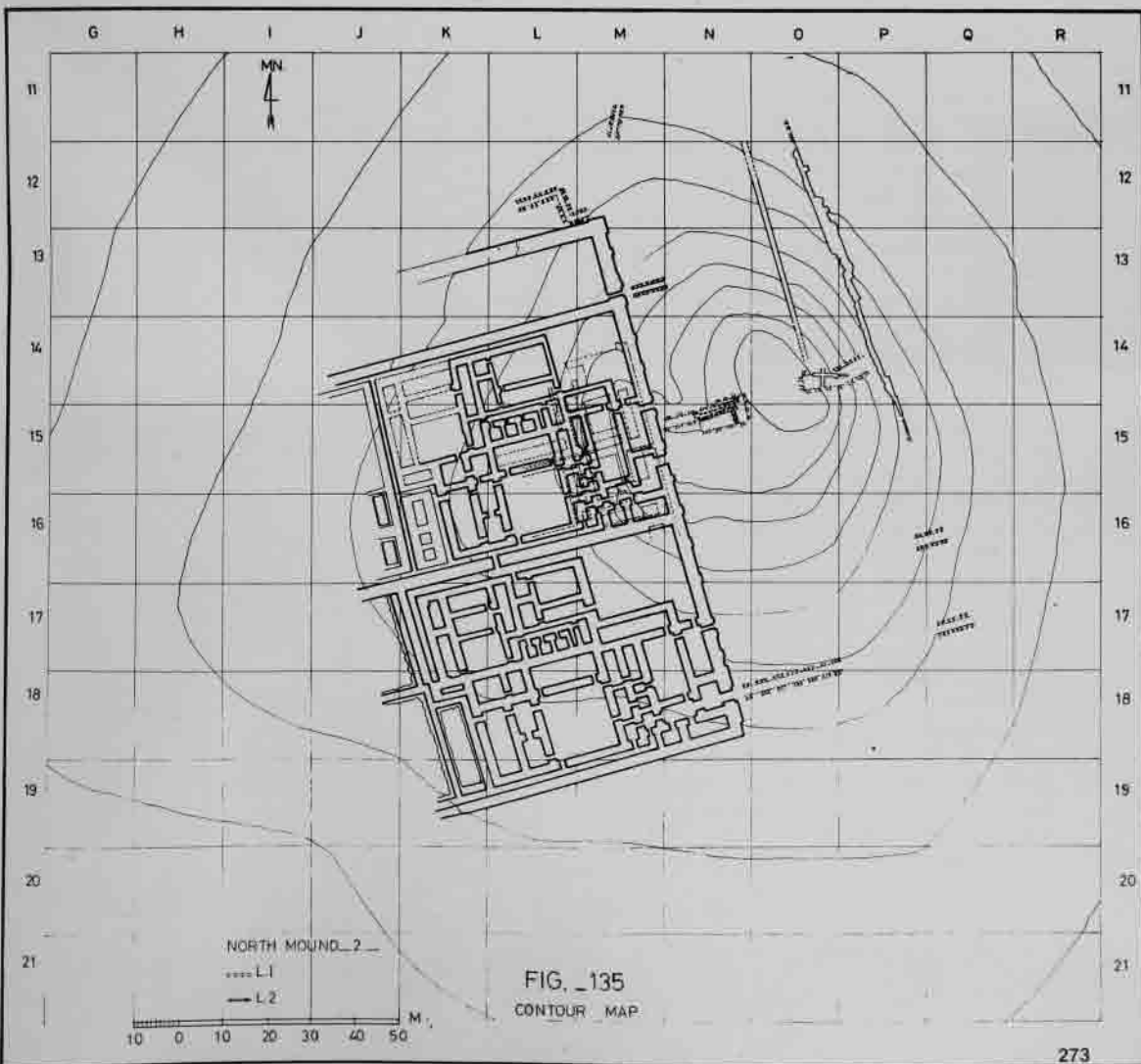
At about one kilometer to the north of Tell Abu Shahrein (Fig. 2) is a circular hill about 300 m. in diameter and 4.5 m. high, designated by us as the north mound (Fig. 135). Here no Ubaid pottery is found, and the main settlements as proved by excavations, belong to Uruk and Early Dynastic periods, with the possibility of an early Akkadian surface level washed away.

Excavations in this mound were undertaken in the third season and resulted in the discovery of a section of

the city wall fortifications, palace buildings in the upper three levels and the stratification of the mound in a sondage situated in the area of the uncovered palaces.

The existence of four building levels with walls in plano convex bricks is attested, and there could be one or two earlier levels of the same sort of bricks. But although no such earlier walls were encountered in the palace sounding, yet the potsherds indicate that the Early Dynastic began in level VI.

FIG. 135



The building in the uppermost level I, is greatly washed away, and only a section of it could be secured. The remains of two adjacent buildings in level II could partly be excavated and partly traced, and identified as a palace. The building in level III could only partly be investigated. Of level IV, only a single wall was discovered in the small area of the sounding, and it was found running in the same direction as the walls above it (see the lower wall in Fig. 136 and the entrance at the end of it, on the left).

FIG. 136

B. The Fortification Wall

In the eastern part of the North Mound was uncovered a section of two walls running approximately parallel to each other and also parallel to the eastern side of the two palace buildings of Level II, at a distance of 35 m. from them (Fig. 137). Thus, these two walls seem to be associated with the palace buildings and contemporary with them, but it was not archaeologically ascertained to which palace level they belong.

These walls are built in plano-convex bricks arranged on edge. The distance between the two walls is approximately 10 m., but widening slightly toward the southeast (Fig. 135). The outer wall which is thicker and more irregular, is strengthened with buttresses on the outside. The inner is one metre thick and not supported with buttresses. Whether the two walls go together making one single fortification of double walls, or each wall was independently built at different times, could not be ascertained. However, attempts were made in vain to follow the stretches of the walls in both directions, and especially toward the southeast, where the denudation of the mound is less. The two test trenches which were dug across the line of the outer wall, produced no stretches of that wall. Such defensive walls are synchronized with the first appearance of city walls in Iraq at Khafaje (Mound A), Uruk and Kish.

Both walls are built on sloping ground. The remains of the outer wall are irregular on both sides. The highest point is in the middle, 110 cm. high, above a foundation of 55 cm. The foundation is built in plano-convex bricks of large size measuring 40 × 21 × 11.8 cm. without a finger mark. The wall itself is built in bricks measuring 20 × 13 × 7-4.5 cm. with finger marks.

FIG. 137



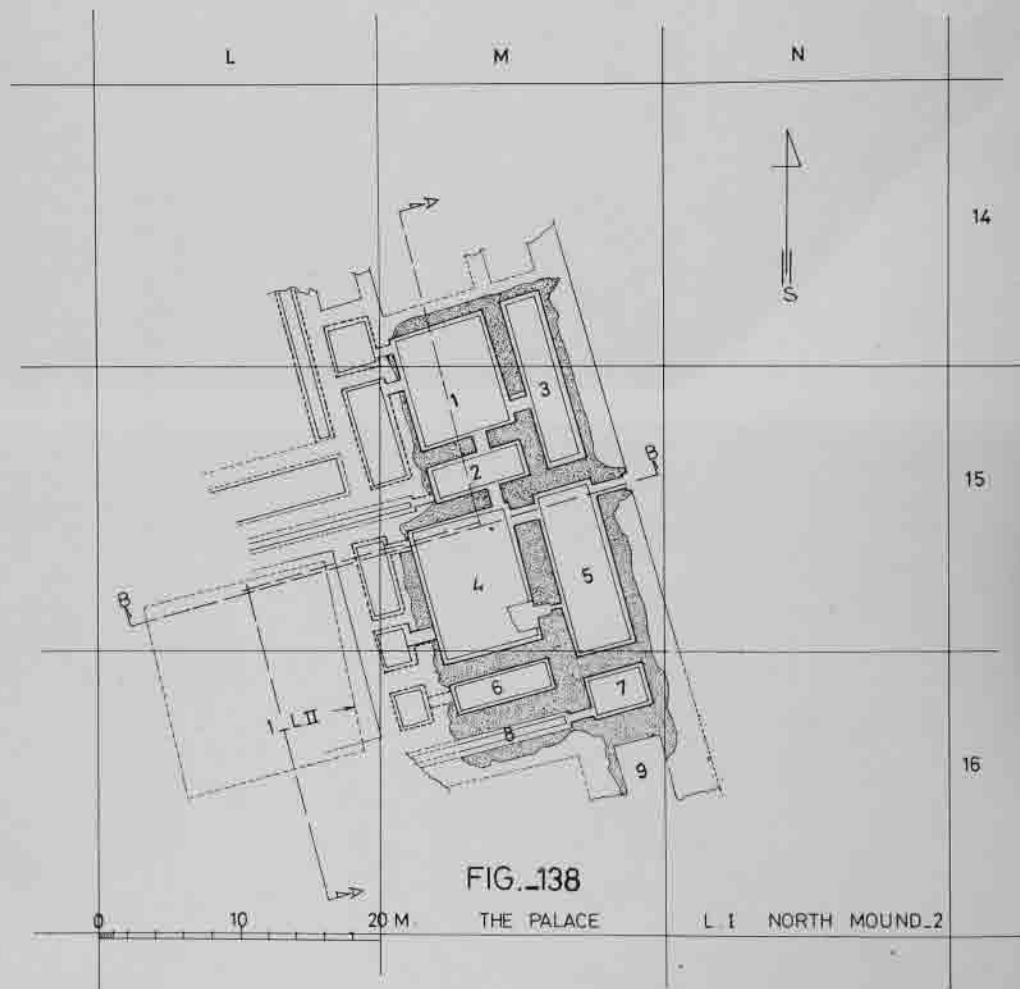
C. The Architecture

1. The Palace in Level I

A section of a building (Fig. 138) in Level I could be recovered in sq. M 15 and the adjacent squares. Its walls are built in plano-convex bricks oriented 18° off the cardinal directions, similar to the orientation of an earlier building (Level II) beneath it. The main gate is in the eastern wall leading to a vestibule (Fig. 138, No. 5) in which there is

an entrance to a courtyard (No. 4) (see in Fig. 139 this entrance with the one corresponding to it in Level II beneath it). Comparing it with the building beneath it one would expect another gate leading to vestibule No. 3, but the thin and low surviving part of the eastern wall did not show any indication of a second gate. Toward the south

FIG 138

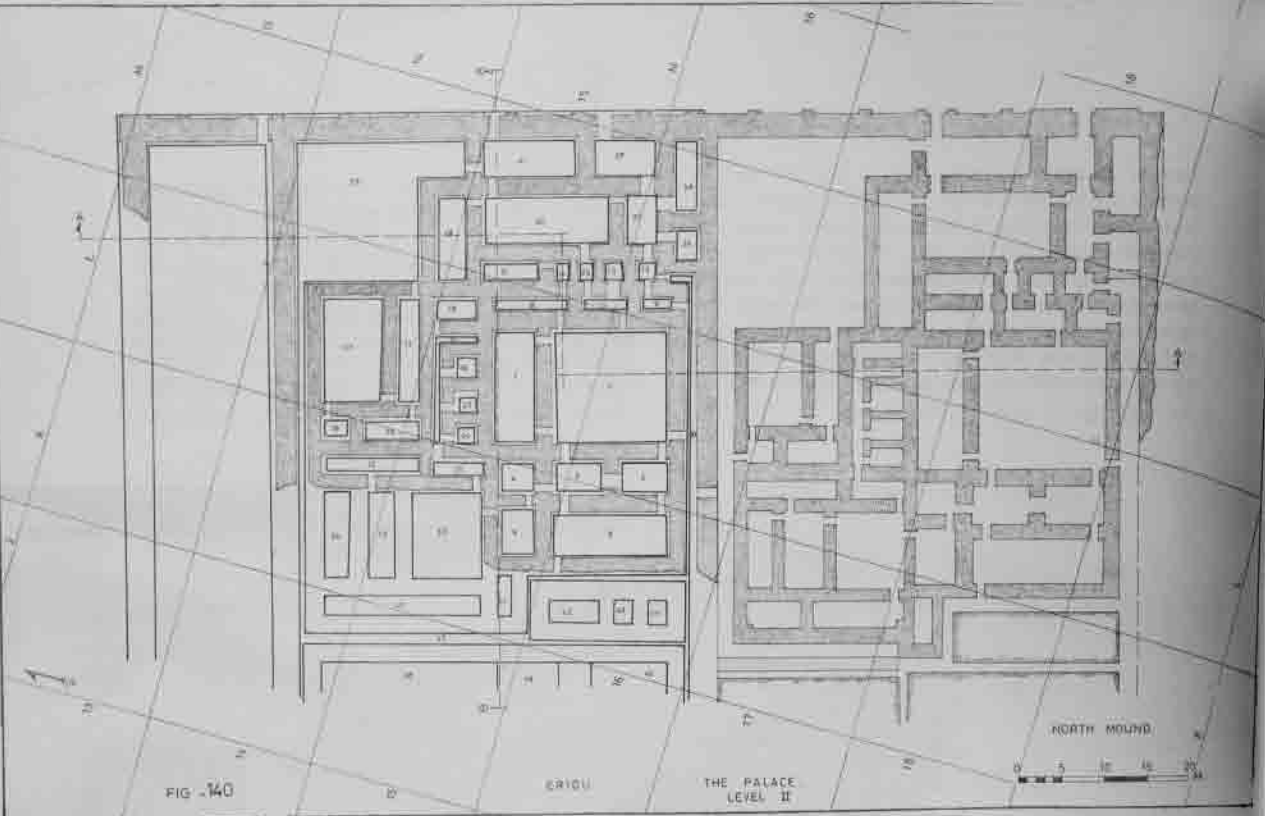


there is an extension of the eastern wall and also of another one parallel to it, very likely belonging to another building corresponding to the south building in Level II (see plan of Level II in Fig. 140). Little has survived of the walls; the highest is not more than 25 cm. high, but the foundations are better preserved. They are deep and wide. For the eastern wall, the foundation is 85 cm. high and 345 cm. wide including an outer offset of 50 cm. and an inner one of 30 cm. It is made up of ten courses of

oblong bricks averaging $32 \times 20 \times 8$ cm., laid flat with the exception of the upper course which is of plano-convex bricks measuring $27 \times 18 \times 4.5$ cm. The other walls in this building are generally 130 cm. wide with foundations 190 cm. wide. These walls are built in plano-convex bricks set as usual on edge in herring bone pattern, and varying slightly in size, ranging between $27 \times 18 \times 4.5$ cm. and $21 \times 15 \times 3.6$ cm.

FIG. 139





2. The Palace Buildings in Level II

Two almost identical buildings were excavated in Level II in the North Mound but unfortunately the western sections of both are completely washed away (Fig. 140). They seem to be built together at the same time, since they have one eastern facade wall, and because they share in the wall which separates them, and also because there is an entrance in that wall which serves as an access from one building to the other. These buildings do not show the general layout of religious architecture, nor do they contain such architectural features as cella, podium or altar. For these reasons these surviving remains seem to belong to a secular building, such as a palace or governor's residence. Each building bears some similarity to the northern building of the Early Dynastic palace discovered at Kish, in being rectangular, and generally surrounded with a corridor between double walls. The palace of Kish similarly consists of two buildings, but not built contemporaneously; the southern building being considered an extension to the northern one and having a different function judging from its special lay-out.

Although the two buildings of the palace at Eridu are almost identical in plan, nevertheless each has independently its own pair of gates situated on the eastern wall, indicating that each building was most probably used for a certain purpose. But that each has a pair of gates is by itself an indication that each building had two functions: possibly residence for the high priest or the governor and his family, and the other the headquarters for administration; with the northern gate at the Eastern side of the palace leading to the former, and the southern gate leading to the latter. Nevertheless there is no explanation of why these two assumed functions of one of the two buildings, were repeated in the other building. One wonders whether there is another possibility for the purpose of these buildings such as that of the *giparu* of the Third Dynasty at Ur. Although there is a lapse of time of approximately five centuries between the two structures, yet it is an established fact that during the Third Dynasty there occurred a revival of the ancient Sumero-Akkadian art and architecture evidenced in sculpture, cylinder seals and such buildings as the palace built by Ur-Nammu, and Shulgi at Ur, which bears similarity to the palace of Naram-Sin at Tell Brak, and the ancient palace



FIG. 141

at Assur⁽⁵⁸⁾. Is it possible then that each of the two buildings at Eridu, as in the giparu at Ur, had originally a shrine in its western denuded section? What may support this supposition is the existence of a corridor running almost from north to south separating the surviving remains from the denuded part, similar to the corridor which separates the shrine of Ningal from the other section of the priestess in the giparu building at Ur. The possibility is strengthened further by the two cult statuettes discovered in the northern building, and whose existence could be easier explained if a shrine existed in the neighbourhood. If this supposition is correct, then why two identical buildings instead of one? Could the answer be that one of the two was for the residence of the priest or priestess of Enki and the other for the priestess or priest of his consort probably the goddess Damgalnunna⁽⁵⁹⁾ (Akk. Damkina), which the two denuded presumed shrines dedicated to both of them?

In spite of all these speculations, it is still safer at the present to consider the two buildings for the purpose of

this report as a palace, for the lack of factual evidence for any other presumption.

The whole structure extends at 18° to the west of magnetic North, from the northwest to the southeast (Fig. 140), to a surviving length of 161 m. The width of each building is 54 m, and its surviving length is 68 m. The north building has a long enclosed space in the north of it, which is contemporary with it. The northern wall of this space shows a thin wide buttress at the corner indicating the extreme end of the whole structure, since it is linked with a similar buttress at the end of the eastern wall. A similar long space seems to exist also to the south of the south building, but it was not investigated for lack of time, if this second space existed, then the total length of the whole structure would be 178 m. For the same reason most of the rooms and courtyards of the south building were not emptied from debris and excavations aimed only at securing its plan (Fig. 141), without even going deeper to investigate the foundations and unfortunately without digging for the extension of the foundations of this

58. A. Moortgat, *The art of ancient Mesopotamia* (London, 1969).

Fig. 45 Palace of Ur-Nammu and Shulgi at Ur.

Fig. 36 palace of Naram-Sin at Tell Brak.

Fig. 37 The ancient palace at Assur.

59. Ebeling and Meisner, *Reallexikon der Assyriologie* vol. 2, pp. 105-106 and 374-381.

building toward the west.

The two buildings seem to have been levelled to an average height of walls of 55 cm. above the foundation, in preparation for the building above, in Level I.

In the north building, the average height of the foundations is 0.75 m.; the width of the foundations of the outer wall is 3.20 m., and of the other walls is 2.00 m. Concerning the walls themselves the width of the eastern side is 2.60 m., and of the thinnest walls only 1.30 m. In the western section of this building, the walls plotted in the plan are presumed.

The two buildings are built in plano-convex bricks with clay mortar. The following measurements of the bricks are recorded. Of the north building: reddish bricks $20 \times 15 \times 5.8$ cm.; bluish bricks $25 \times 15 \times 5.7$ cm. with a thumb mark. Of the south building the bricks measure $27 \times 12 \times 9.5$ cm. and $25 \times 12 \times 5.9$ cm.

Each of the two buildings was divided into two parts, and each part has its own main gate. In the case of the north building which is more fully excavated (Figs. 142 & 143), the northern of the two main gates leads to chamber 31, and from it to the L-shaped courtyard 29 which leads through a corridor to the western section of the building and through an entrance to the unit which consists of courtyard 23, chamber 17 and rooms 25 and 26 (Fig. 140). The other main gate of this building, which is wider, leads to antechamber 39 and from it to room 37 which has four other doors, two of which lead to the guards' rooms 38 & 36 and the third entrance leads through small rooms 13 and 9 and a corridor 10 to the main courtyard 1. The fourth entrance communicates with chamber 30 and from it through two small rooms 35 and 11, to the main courtyard 1. The main courtyard is almost square 13.70×13.30 m. On its northern side are two entrances leading to a long chamber 13.30×5.20 m., which probably was for the audience, functioning in the same way as the throne room later in Assyrian palaces. The two entrances in the western side of the main courtyard lead through rooms 3 & 2 to chamber 5 which seems to have an important function. One of these two entrances leads through rooms 3, 4 and 6 to courtyard 32 which belongs to what seems to be a large living quarter including the small rooms 18, 14, 16, 27 and 24 (Figs. 144 & 145), in which were found kitchen utensils and ashes and drains and stone.

Concerning the pavement of the north building we noticed in some places the existence of two pavements the lower covered with ashes and charcoal which may indicate that general fire took place in this building. The details of these two pavements in chamber 28 are as follows: the earlier pavement consists of three floors, beginning from bottom: 15 cm. of sand then 14 cm. of clay and broken bricks, and finally a layer of 8 cms. of clay and sand sealed with a thin layer of clay, making altogether a thickness of 37 cm. The later pavement is also made up of three layers which are: 15 cms. of ashes, charcoal and potsherds, resulting from a general fire and from dwelling in this building. Above it is a layer of 15 cm. of clay and potsherds covered with 10 cm. layer of broken bricks and caly. It seems that this building was burnt and when it was re-roofed the second pavement was prepared. See the various layers of the two pavements shown as steps at the bottom of Figs. 146 & 147.

In chamber 30 — 5.70 m wide, and uncertain whether it was roofed or not — was found a large squat jar (Fig. 156, No. 6), 56 cm. high buried in the lower floor with its mouth covered by a slab of unidentified stone under the layer of charcoal and ashes which separate the two pavements of the north building. Inside this jar were three bowls (Fig. 156, Nos. 3 & 5) and animal bones.

In the middle of room 16 is a drain made up of several inverted large jars one above the other and each perforated at the bottom for the water to pass through. The mouth of this drain is stopped with a jar (Fig. 156, No. 10) covered by a bowl (No. 1) This drain belongs to Level II but there are in the same room two others (Fig. 144) sunk from above and probably belonging to Level I. Similarly in room 27 are found three drains, two of which probably belonged to the upper level. But to Level II belongs an inverted large jar (similar to Fig. 156, No. 6) with a large hole made later at its bottom, found at the entrance of the room covered with a conical pottery pipe, 35 cm. long with diameters of the two ends 14 and 30 cm.

The drains of Level II are linked with a channel made up of several pottery pipes covered with slabs of limestone, found beneath the floor of the courtyard 29 extending from west to east under the threshold of the entrance leading from that courtyard to chamber 31 and thence outside the building through the northern gate under its floor.



FIG. 142 ▲

FIG. 143 ▼





FIG. 144

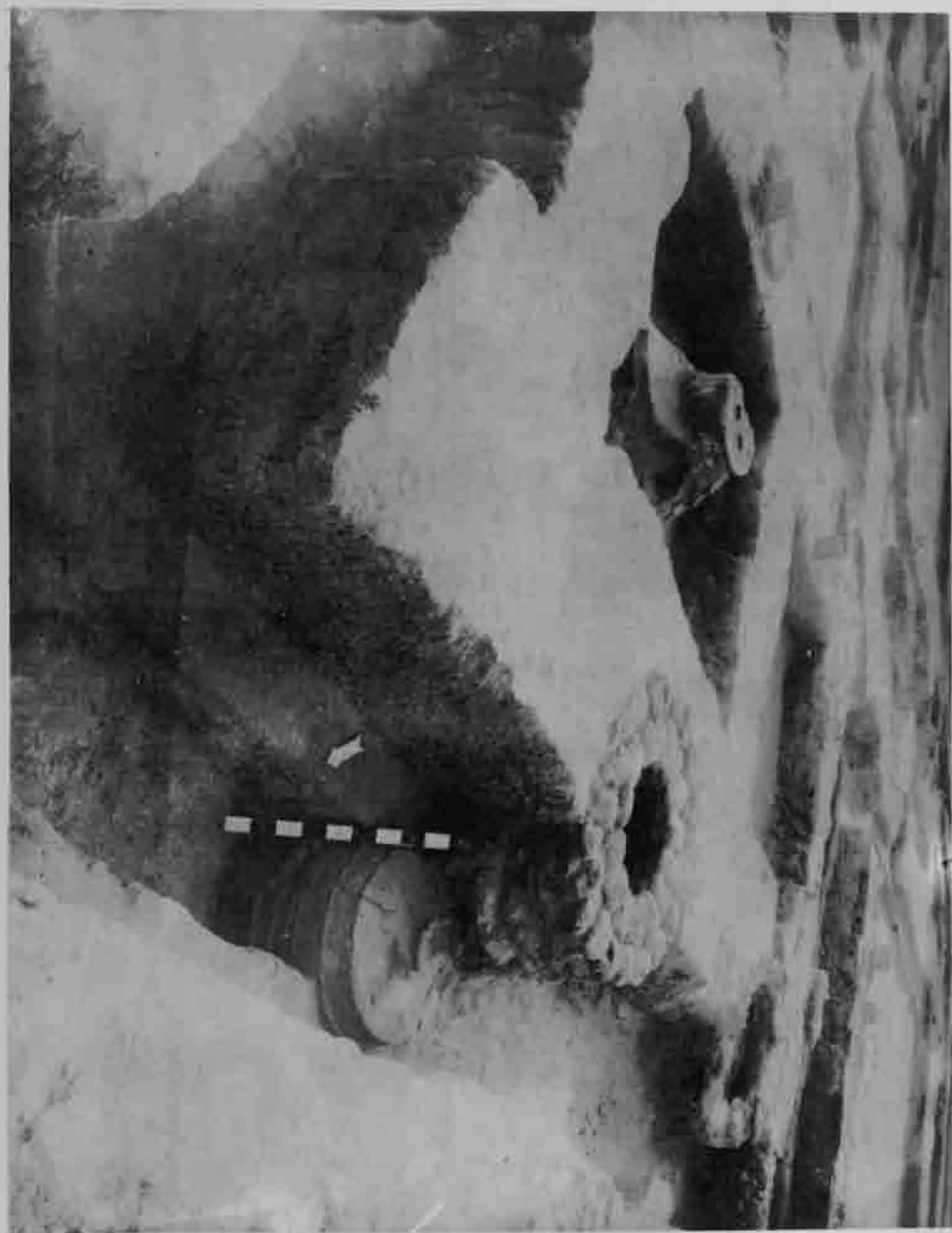


FIG. 145

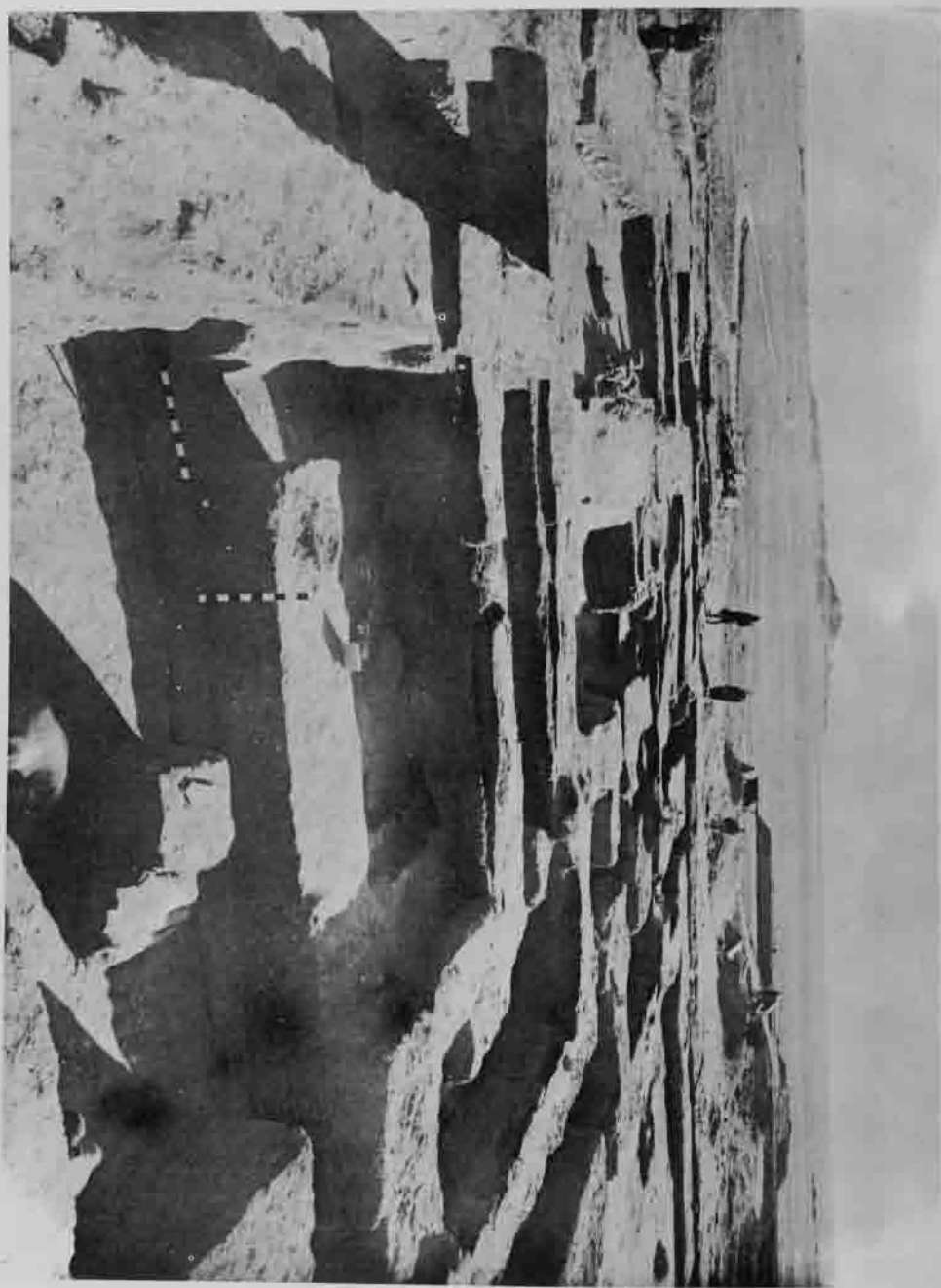
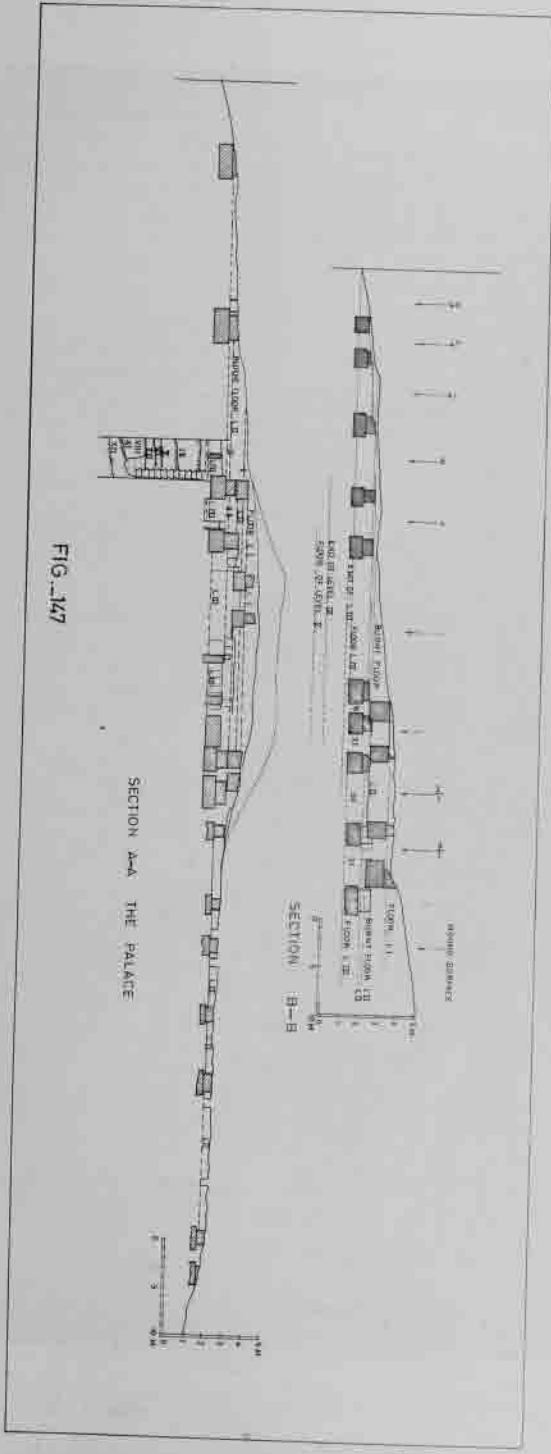


FIG. 146

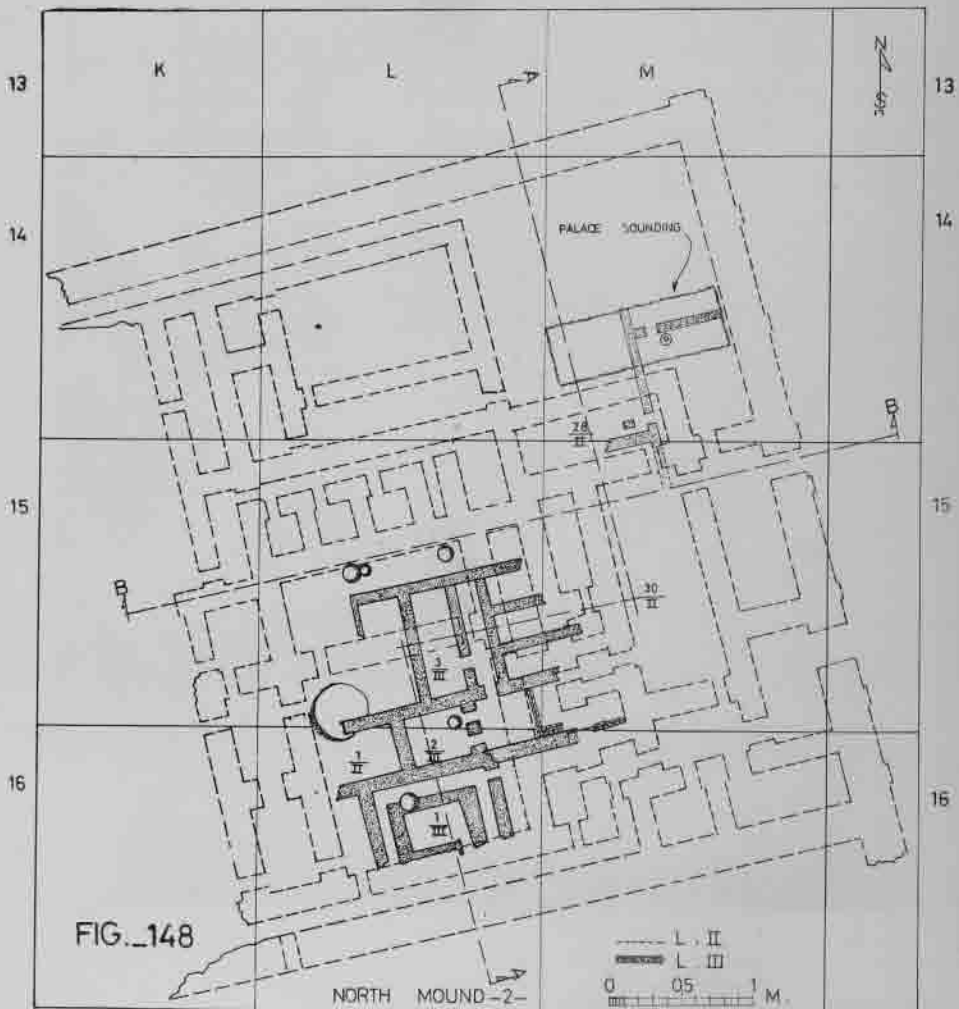


3. The Palace in Level III

Excavations beneath Level II were undertaken only in the courtyard 1, and the L-shaped courtyard 29 and 28, where two sections of a building in Level III were uncovered. The small circles in the plan (Fig. 148) are drains and kilns of the level above. Room 1 is surrounded by a corridor on at least three sides, its northern wall is broken by a drain of large ribbed jars, belonging to Level II. The circular podium of about 4 m. diameter belongs also to Level II. The double entrance to Room 2 is possibly due to a change in the location of the entrance; the southern entrance is possibly the older (Fig. 149).

The walls were found cut to one level in preparation for the building in Level II, and standing to a height of c. 80 cm. The foundations where investigated are only 13 cm. high made of two courses of plano-convex bricks. The walls are thinner than those of Level II, roughly about 1 m. wide, and a few are even 60 cm. wide. They are built in plano-convex bricks of reddish brown clay, of various sizes $17 \times 8 \times 5-7$, $20 \times 10 \times 5-7$, and $21 \times 13 \times 6$ cms.

Generally speaking, and in comparison with Level II, the walls of Level III are similar in orientation but not in plan, nor in thickness or strength. Nevertheless it had, most probably, the function of the building which was built over its ruins, i.e. a palace.



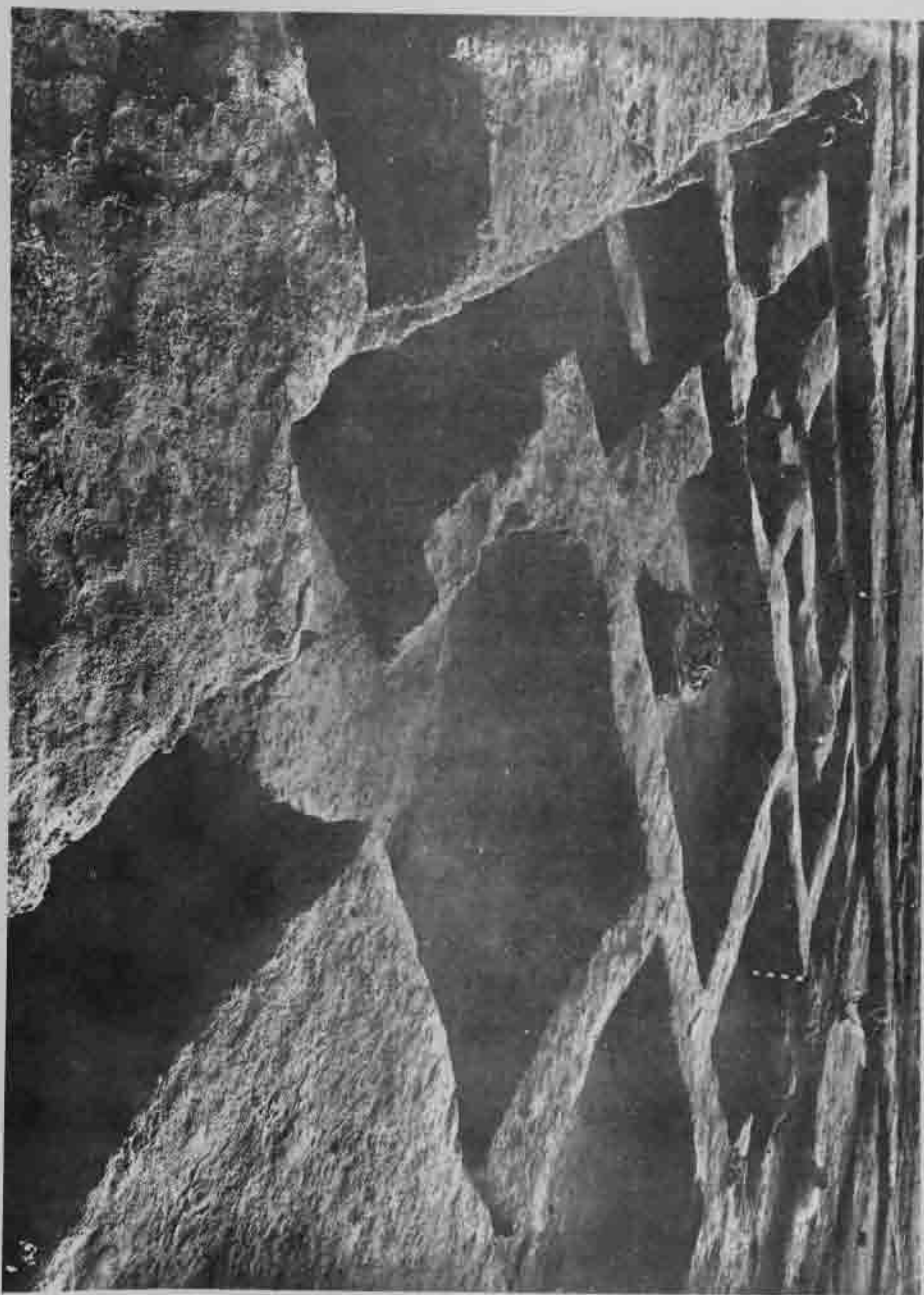


FIG. 149

D. The Finds from the Palaces

1. Stone and Copper Objects

A statue of a man (IM. 54599) in alabaster (Fig. 150). 20 cm. high, was found in fragmentary condition. Three fragments of its body were discovered in the courtyard 1 near the entrance to room 11, at about 30 cm. above the first pavement, together with several small mosaic cones of baked clay usually associated with the Jamdat Nasr period and which probably belong to a building lying beneath in the North Mound but not encountered in the Palace Sounding. Of the same stone is the head which was found at a distance of about 12 m. from the body, in chamber 30, near the southwestern corner at about 20 cm. below the burnt floor and 10 cm. above the offset of the foundation (Fig. 151). There is a hole both in the neck and the body and there is a clear join between the two, indicating that the statue was broken at the neck, and the head was re-fastened to the body by means of a copper bar inserted in the drilled holes.

FIG. 150 A

This statue seems to represent a worshipper standing with his hands clasped, in the usual way, on his breast, with the thumbs outstretched. His body is dressed only from the waist downward to the ground, with a tunic fastened on the body with a belt tied at the back. His eyes are made of shell and lapis lazuli and his eyebrows inlaid in lapis lazuli. His head is covered with a conical cap, which is of unusual shape compared with the known cult statues from Assur, Diyala region, Nippur, Mari and other Early Dynastic sites. It may be a local head dress pertaining to Eridu. The nearest thing to this conical shape is the helmets of warriors in the Stela of Vultures, and the Standard of Ur; but in the statue from Eridu there is no line separating the headgear from the head. Could it then be the hair arranged in a conical shape above the head, similar to the hair arrangement of Ubaid figurines about fifteen centuries before? Parts of both arms are missing, and restored in the laboratory. The height of the head is 4 cm. and the maximum width is 3 cm.

FIG. 150 B

The head of another statue of a man (IM. 54600), also in alabaster, was found in the southeastern corner of room 4, at 15 cm. above the first pavement (Fig. 152), covered by a door socket of a rough square slab of blue marble; both apparently buried there at the end or after the destruction of the palace in Level II probably in the process of constructing the building of Level I. It is 3½ cm. high, 3 cm. maximum width, topped with conical gear or arrangement of the hair, similar to the head dress of the previous statue. The eyebrows were inlaid in lapis lazuli and

FIG. 150 A



M. 54599





FIG.152C

FIG. 151 



A



B

FIG. 152

the eyes in shell and lapis lazuli. No recognizable fragment of the body was found, but a lower part from waist to ground of a possible third statuette was found in courtyard 1; cylindrical in shape, 3 cm. high and 2½ cm. in diameter.

Fragment of black stone spotted in white dots (IM. 55185) 22 × 22 cm., showing in relief the lower part of two leaves, found in Rm. 20 at 35 cm. below the surface of the mound (Fig. 153).

An eye (IM. 55188) in shell and lazuli, 1.7 cm. long, found on the burnt pavement in courtyard 1.

A discoid piece of inlay (IM. 55187) in shell inlaid with lapis; the diameter 3.8 cm. and thickness of 0.3 cm. It is incised with an eight pointed star, inside two concentric circles, found in Level I courtyard 1.

Triangular piece of inlay (IM. 55180) 10 × 8 × 5 cms. in alabaster, itself originally inlaid with a triangular

piece of probably lapis lazuli, found outside the palace at 80 cm. below the surface of the mound (Fig. 153).

Pendant (IM. 55196) in the shape of a leaf, in alabaster pierced sideways, 5.7 cm. long, found in courtyard 1 of the upper level.

Double edged stone axe (IM. 55177) perforated in the middle for the handle, 8 × 4 × 3 cms., Level I courtyard 4 (Fig. 153).

Celt in bluish green stone (IM. 55174) 5 × 4 × 1.3 cm., Level I courtyard 1 (Fig. 153).

Whetstone in pinkish sandstone (IM. 55176) 10 × 3 cm., in Level I courtyard 1.

Cylinder seal (IM. 55181) in white marble with greyish veins, engraved with pictures of a temple, gazelle and probably a human figure indistinctly carved, 3.3 cm.

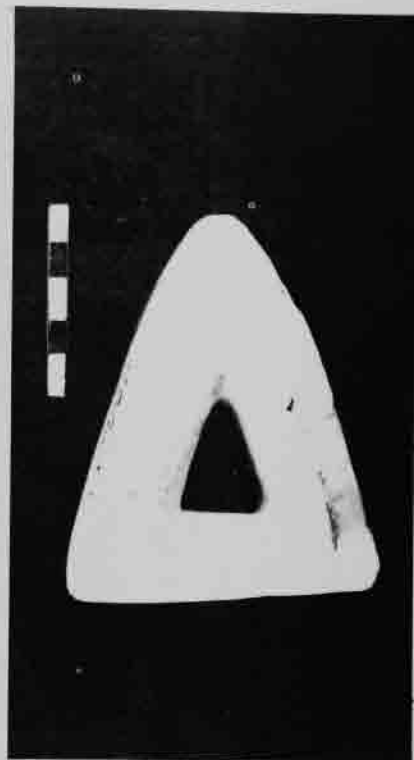
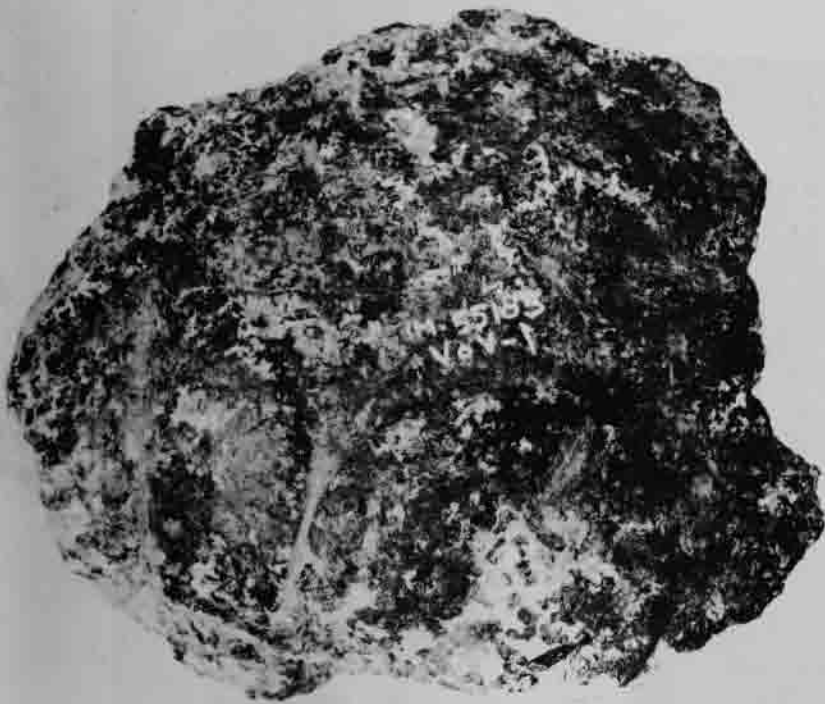


FIG. 153

high, 4 cm. diameter, found near the city wall.

Cylindrical bead (IM. 55175) of greenish blue stone perforated longitudinally 6.4 x 2.4 cm. Level I on the upper pavement in the main gate of the building.

Bowl in greyish sandstone, 33 cm. in diameter, 17 cm. high and a flat base of 21 cm. Level I.

A battering implement in copper (IM. 55138) (Fig. 154), 39 cm. long, 12 cm. wide, the sharp edge is the flat end, while the other end which is round and collared is the haft where a wooden handle was inserted, and fastened by a nail through a side hole. It was found in Level II on the floor of room 18 near the western wall together with corroded lump of copper objects in which could be

identified two fishing hooks, nails and a small vessel.

Copper axe, sharp end missing (IM. 55137) or a hammer 11 cm. long, 5 cm. wide. The diameter of the haft 7 cm. Level II Room 8 on lower pavement (Fig. 155).

Harpoon head in copper (IM. 55189), 5.5 cm. long, Level I above courtyard 1 (Fig. 155).

Arrow head? in copper (IM. 55192), 11 cm. long; near surface (Fig. 155).

Spearhead in copper, 6 cm. long. Level II courtyard 1, on burnt floor (1st pavement).

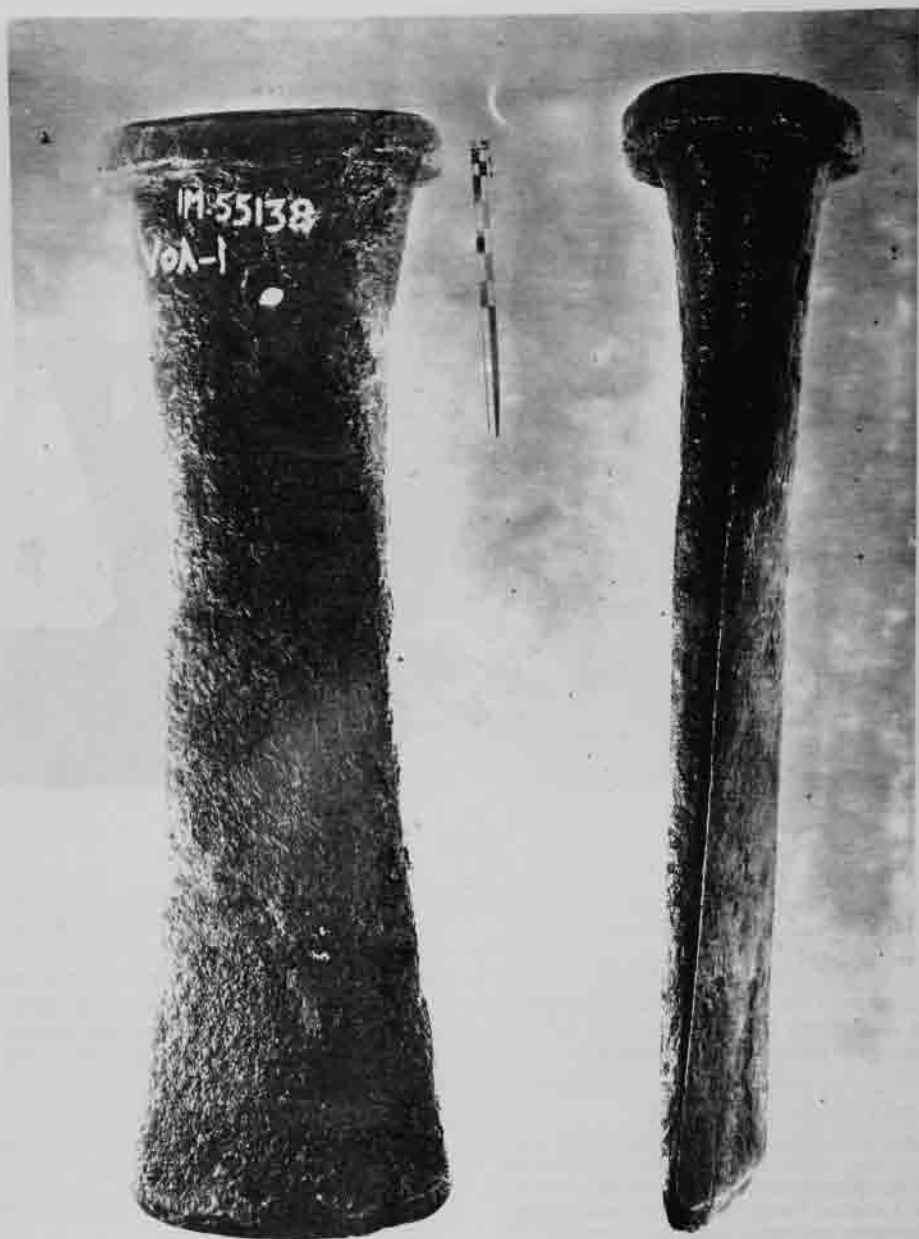


FIG. 154

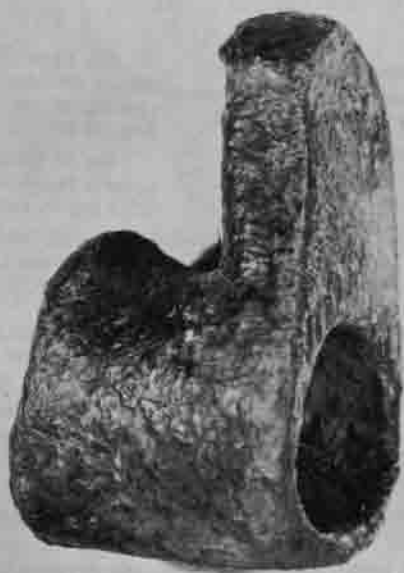


FIG. 155

2. Pottery

Fig. 156 represents the complete or almost complete vessels discovered in the three upper levels.

No. 1 Large bowl in reddish clay with buff surface, wide lip, ring base, decorated with applied rope design in four lines, Level II Rooms 5 & 3. Similar bowls were found also in Level II, Room 7 and courtyard 1. It was used as a water basin, and reused for covering cess-pool jars (see Fig. 145).

No. 2 Large water jar, in reddish brown clay, hole mouth, ring base, with projecting ridge applied at carination. Level I & II reused as a cess-pool after making a large hole at the bottom.

No. 3 Small bowl in reddish ware, flat base. Level II, Room 31, found inside jar no. 6.

No. 4 Jar in reddish ware, with greenish buff surface, oval body, ring base. Level I in debris of Room 5, but it could be denuded upper level (Cf. Delougaz, Pl. 184, C 547. 320, late Larsa or Old babylonian).

No. 5 Bowl in reddish ware with greenish buff surface, flat base, decorated with twisted applied rope, inside jar no. 6, Level II, Room 31.

No. 7 Small bowl in reddish brown ware, buff surface, hole mouth, surface at Level I, Room 7. (Cf. Delougaz Pl. 163, B 652. 500 ED II & Pl. 144 A 652. 500 ED III), Pl. 142, A

No. 7 Small bowl in reddish brown, buff surface, hole mouth, surface at Level I, Room 7. (Cf. Delougaz Pl. 163, B 652. 500 ED II & Pl. 144 A 652. 500 ED III).

No. 8 Bowl in reddish brown ware flat base, Level I, Room 5 (Cf. Delougaz Pl. 146, B 032.200 a ED III or Early Akkadian).

No. 9 jar in greyish brown ware, round body, flaring rim. Level II, Room 14 (Cf. Delougaz Pl. 155, B 514. 570 ED III).

No. 10 Jar in reddish brown ware, flaring rim, wide sloping shoulder, flat base Level II, Room 16 upon the opening of the cess-pool (Cf. Delougaz Pl. 142, A 516.270 ED I, or 514.270 ED III).

No. 11 Elongated jar in brown ware, grey from fire, Level II, Room 14 (Near to Delougaz Pl. 156, B 16.270 ED II and Pl. 155, B 514.270 ED I?).

No. 12 Spouted jar in over baked reddish brown ware, flat base, Level II, Room 15 the earliest pavement, (Cf. Delougaz Pl. 180, C 526. 262b. Bottom and spout are ED I).

No. 13 Spouted jar, in reddish brown, level II, Room 8 in the southeast corner (Delougaz Pl. 175, C 525. 262c, ED I, Pl. 180c, 525. 362b ED I & II).

No. 14 Bowl in reddish brown ware, buff slip, flat string-cut base. Level II (Cf. Delougaz Pl. 146, B16. 200 ED III).

No. 15 Cup in reddish brown ware, brownish slip, roughly made, string-cut base, Level II.

No. 16 Small bowl in reddish brown clay, light buff slip, string-cut base, Level II courtyard 1.

No. 17 Small bowl in reddish brown clay, string-cut base, Level II.

No. 18 Small bowl in brownish buff clay, buff slip, rings at base, Level II.

No. 19 Wide mouthed jar, in brownish buff clay, buff slip, with protruding bulge, Level I.

No. 20 Bowl in brownish clay, buff slip, several of this type, some in reddish others in brown clay, Level III.

No. 21 Fragment of lugged jar with rope ridge at the shoulder in brownish pottery, buff surface Level I, near surface. (Cf. Delougaz Pl. 193, D 526. 371 ED III & I).

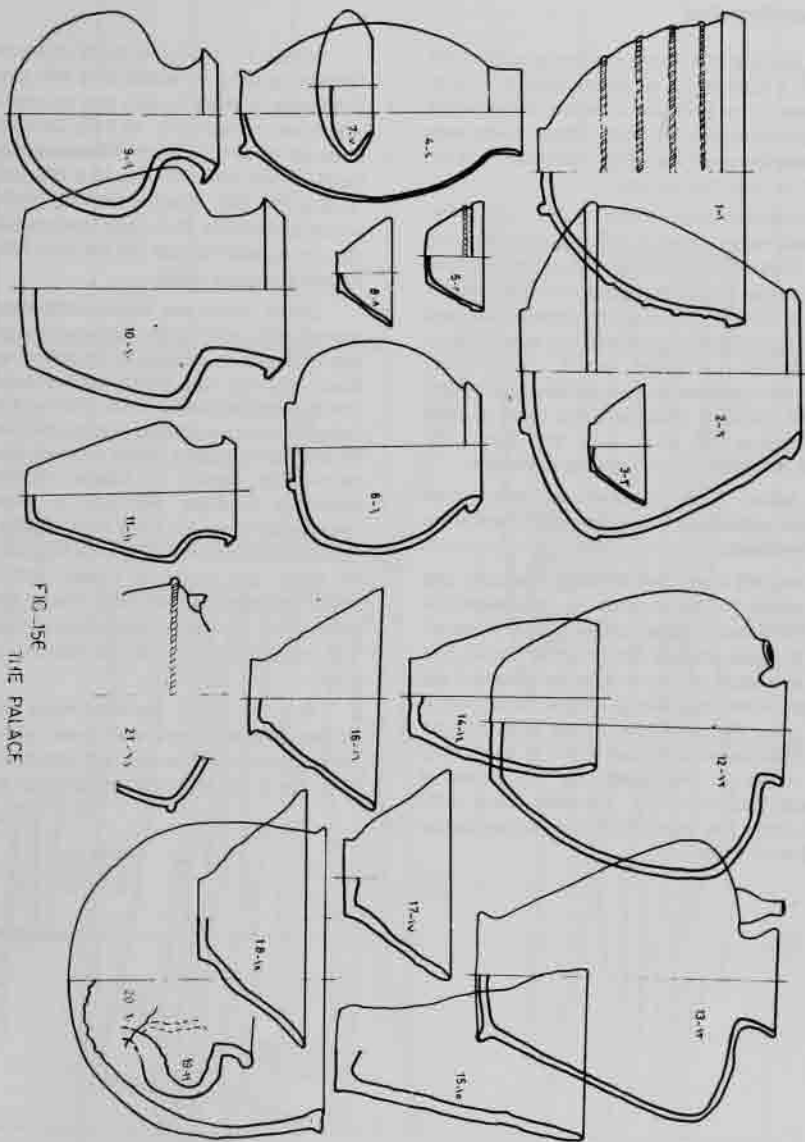


FIG. 156
TILE PALACE

تصميم

E. The Palace Sounding

For the purpose of knowing the stratigraphy of the North Mound, a sounding in an oblong area 12×5 m. was undertaken in the L-shaped courtyard of the palace in Level II (see location in Fig. 148). Fifteen levels were recorded above the virgin soil which was reached at the depth of 7.90 m. from the surface.

The foundation of Level I existed to the south of the sounding. Walls encountered in this sounding belong to Levels II-IV (Figs. 157c & 136), all built in plano-convex bricks, with no other structural aspects in the other levels, except in Level VII (Fig. 157) in which occurs a pavement of unhewn slabs of stone covered with one layer of bricks almost *riemchen* $25 \times 9 \times 7$ cm. and $21 \times 9\frac{1}{2} \times 6$ cm., with greenish thin clay floor above the bricks covered with burnt material. Similarly there is a thin layer of burnt material separating the bricks from the stone, and indicating the possibility of two separate pavements.

Further below, floors of ashes are encountered running almost horizontally, except in Level XII where the floor sloped eastward.

From Level XIII downward, the excavated area was confined to square 1×1 m. in which two other levels XIV & XV (Fig. 157A) occur, separated by a layer of ashes. Level XV is a greenish clay floor. Further below pure sand is met at a depth of 7.90 m. from the surface of the mound, ground water appeared at a depth 25 cm. below the floor of Level XV, i.e. below the top surface of the sand layer. Excavation continued down to a depth of about one metre in the water, but no traces of archaeological deposit or of inhabited floors were encountered, and it was then difficult to dig further deeper due to the ground water.

Levels I-V produced types characteristic of Early Dynastic pottery, in reddish clay with generally buff slip. Solid base chalices (known also as solid footed goblets) which are characteristic of Early Dynastic I, occur only in levels IV & V. Four of these chalices were found in Level IV (see Fig. 158, Nos. 46 & 49) and twelve in Level V (see No. 62). There exist also more open chalices, almost bowls (Nos. 63 & 64) in fine brownish clay with buff slip, corrugated spirally like the solid base chalices, and having string-cut bases.

Levels VI-XV has accumulated debris nearly four metres high, with pottery representing pure middle to late Uruk culture, starting at the bottom with bevelled rim bowls (Fig. 159, Nos. 99-101) and ending at Level VI with inverted spouted jars (No. 66). Worthy of comment are the bevelled rim bowls existing only in Level XIV & XV. They are hand-made in coarse brown clay with black core. Larger hand-made bowls, in coarse reddish brown clay tempered in straw, with one to three deep finger impressions near the base from outside, are extremely common in levels IX-XI (Fig. 159, Nos. 79, 82, 83). Similar to these are found in Levels XIV-XV but without finger impressions (No. 102). These bowls are usually hand-made in reddish brown clay, tempered with straw, with reddish buff slip. No. 83 has only one deep finger mark.

Nos. 70, 80, 81 are hand-made bottles, in reddish brown clay, tempered with straw, grey core, scraped outside near the base. Jars with inverted spout No. 66, 72 & 78 are in fine buff clay with greenish buff slip.

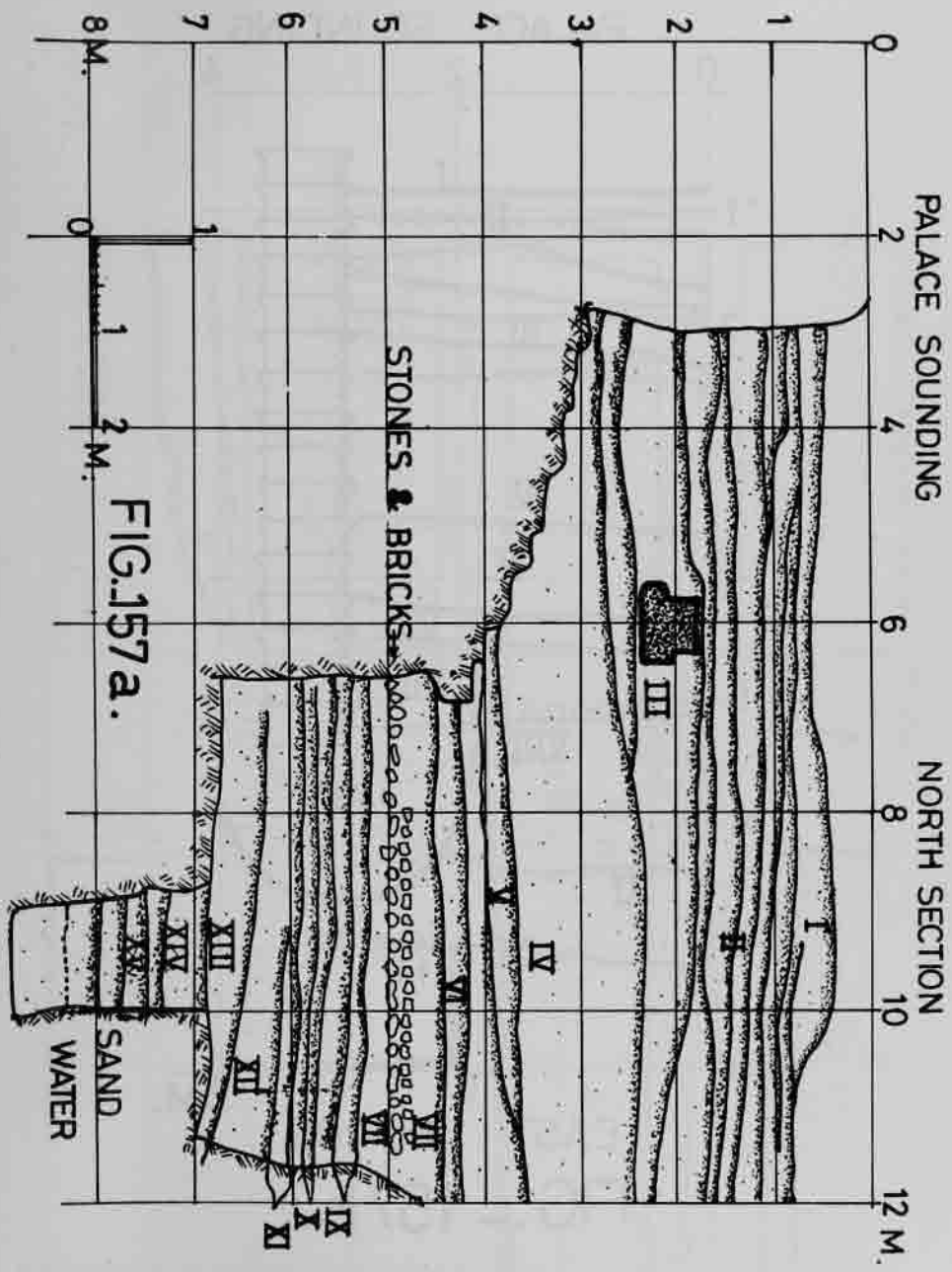


FIG. 157 a.

PALACE SOUNDING

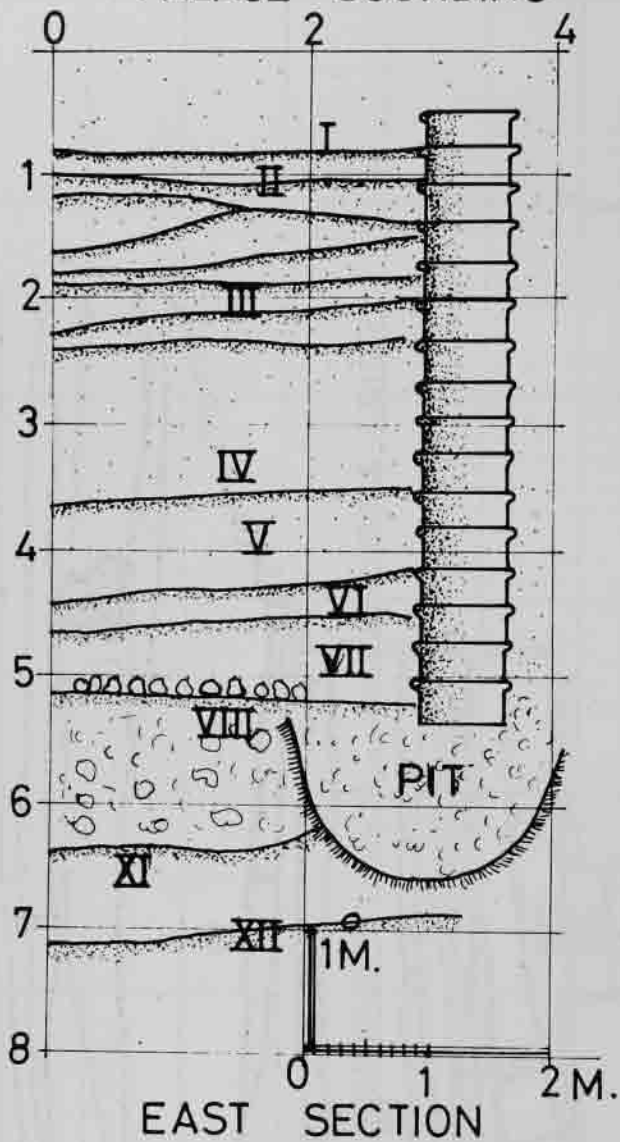


FIG.- 157 b.

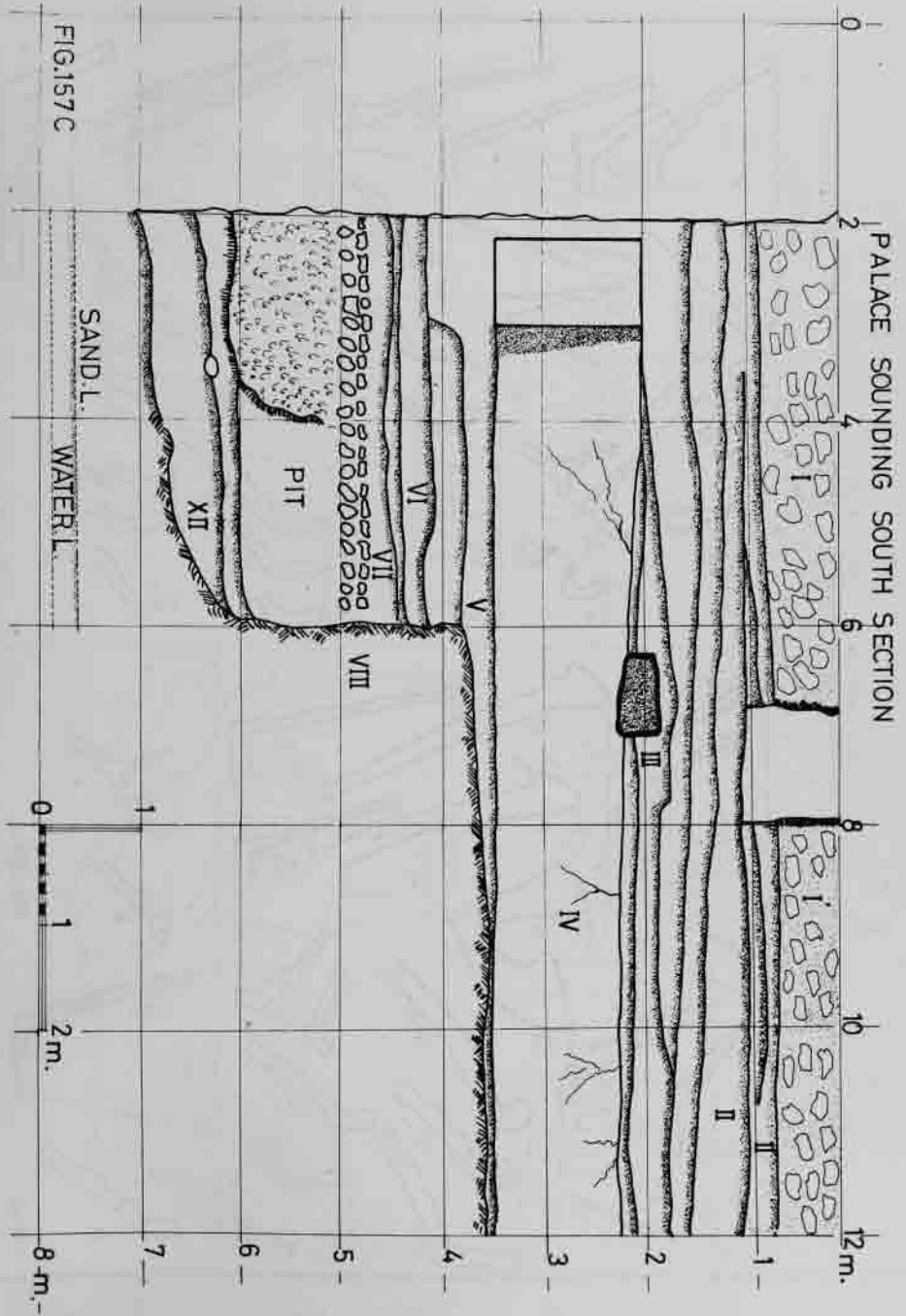
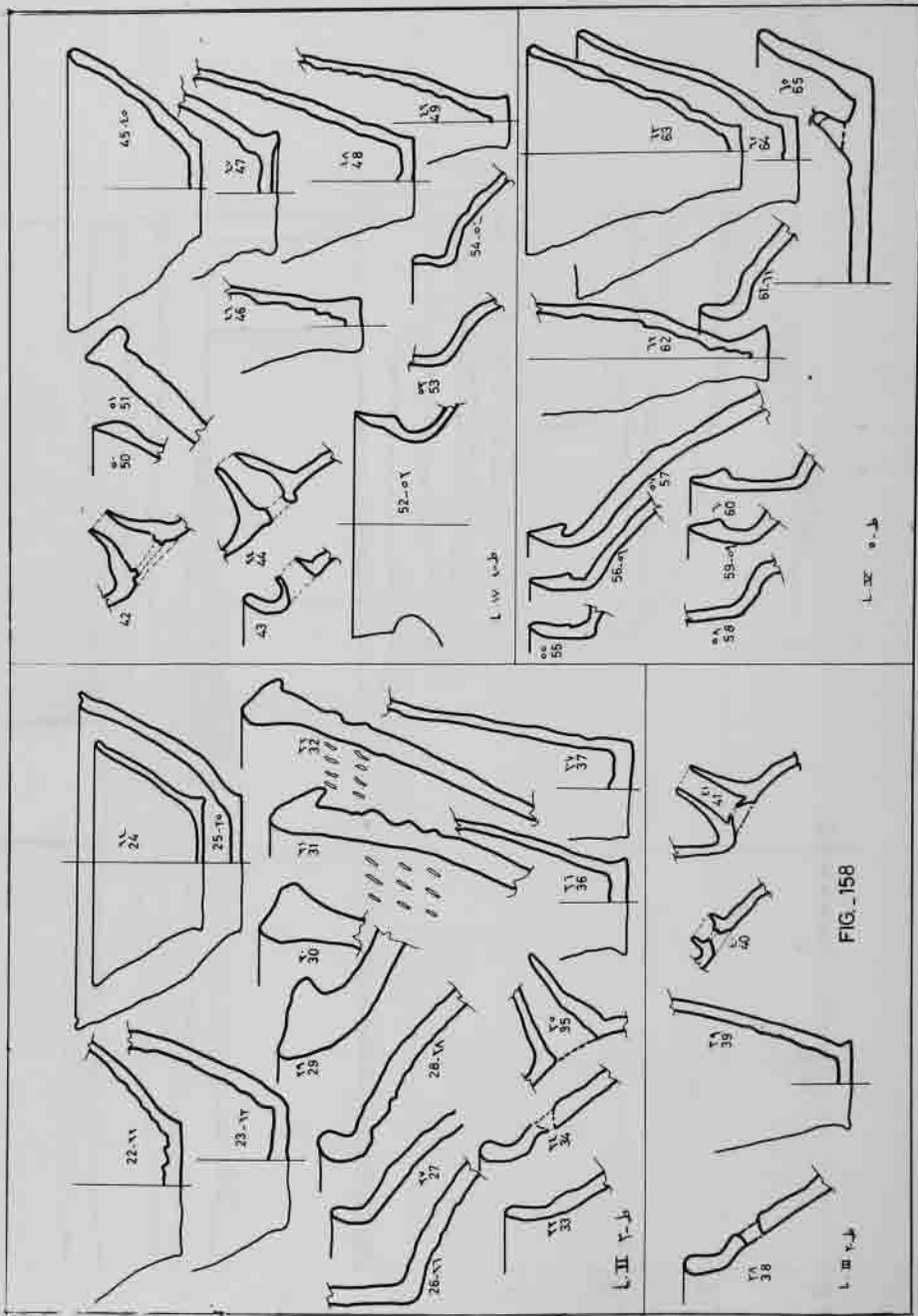
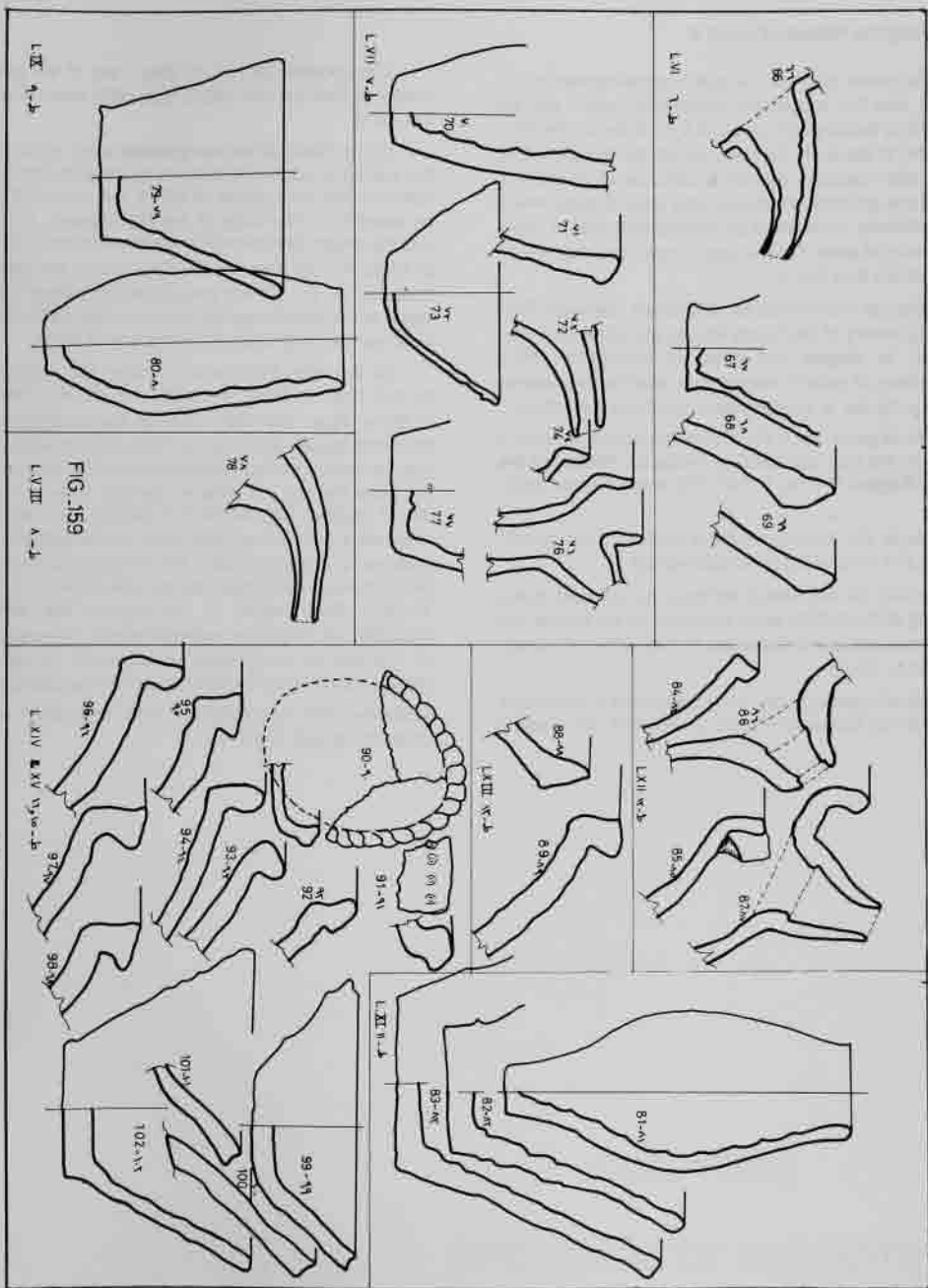


FIG.157C



سليمان القاسم



F. Dating the Palace of Level II

The palace of Level II is built in plano-convex bricks, and so also the succeeding building in Level I and the preceding buildings of Levels III & IV. It should therefore be dated to the Early Dynastic period, but to which of its three parts it belongs, is to be decided. Levels IV and V of the palace sounding produced solid base chalices which are generally considered as characteristic of ED I. Level II is devoid of such chalices, and it could consequently be either of ED II or ED III.

Although there could be differences between Early Dynastic pottery of the Diyala Region and of the Ur-Eridu Region, in shapes and dates of occurrence, yet a comparison of palace vessels with stratified equivalents from the Diyala, is indispensable for dating the palace.

The large jar No. 6 Fig. 156 of the palace at Eridu is similar to the type published by Delougaz, **Pottery of the Diyala Region** Pl. 196, D 743. 310 which is dated to ED II.

The jar No. 9 of the palace is similar to Delougaz Pl. 155, B 514. 570 which is considered ED III.

Jar No. 10 with flaring rim found as a stopper to the opening of drain in the upper pavement of the palace, has similarities in shape to Delougaz Pl. 142, A514. 270 which is dated to ED III.

The elongated jar No. 11 of the palace is of the type published by Delougaz Pl. 156, B 516. 270, and dated to ED II.

The spouted jar No. 13 (Fig. 156) of the palace is similar to Delougaz Pl. 180, C 525. 362b which is dated to ED I & II.

On the basis of this comparative study of the pottery, the palace of Level II is likely to be dated to late ED II or rather to the early phase of ED III, and could perhaps be ascribed to the kings of the First Dynasty of Ur, who had the means and interest in constructing such a building at Eridu, the city cherished to their hearts, and nearest to their capital, Ur. We are aware that the palace of Kish is dated to the Mesilm period which is a little earlier than the date we are proposing for the palace of Eridu.

Of the other finds in this palace, the metal objects do not help in fixing its date, nor do the statuettes, in stone (Figs. 150-152) which for the circumstances of their discoveries and also for their peculiar style are not easy to date. The two heads found buried from above in the pavement of the palace, and the body of Fig. 150 found together with mosaics of Jamdat Nasr, suggesting they were brought up from lower levels probably in the process of digging a drain, but not necessarily that both the statuettes and mosaic cones were originally from one building level within it. As regards the style, the statuettes do not show expressiveness by exaggeration of features or proportions characteristic of the many statues found in the Diyala Region. On the contrary these statuettes are characterized with naturalism in their proportions and features.

CHAPTER 9

SPECLALISTS' REPORTS

Section A

The Eridu Crania, A Preliminary Report

by

Carleton S. Coon
University Museum
University of Pennsylvania

During the winter of 1947-1948 the Iraq Department of Antiquities conducted excavations at the early Sumerian site of Eridu. A number of graves was uncovered, and from them remains of at least fifteen human beings were unearthed and preserved, as well as the skeletons of two dogs. The latter seem to have been salukis.

All of the crania had been deformed in one fashion or another, presumably after burial, by earth pressure. Some, as for example 52-B and 181, had been flattened from above. This has made them look superficially like certain Maya Indian crania, deformed intentionally in infancy. Others were squashed from side to side, as in the case of ZB, while still others were bent asymmetrically and look as if they had been passed through a wringer. Owing to these distortions one cannot be sure of the vault measurements of any of these skulls. In most cases the orbits seem also to have been altered while the lower face bones are usually little affected. The palates, mandibles, and teeth, however, seem to retain their original conditions. Although this deformation renders many measurements invalid, the fact that the several crania were bent in different planes gives one more clues to their original form than would have been the case if all had been distorted in the same way.

These crania, and in three cases the other bones as well, were covered with wax at the site. Although it held the specimens together and protected them during shipment and storage, the wax was hard to remove. Our efforts to clean the bones and prepare them for study was only partly successful. The six least distorted skulls, and the two most complete extra mandibles were cleaned, and as each area of bone was bared it was painted with a thin solution of ambruid and acetone. A thicker solution followed when needed.

The cemetery at Eridu is believed to contain several hundred burials, some of which, it is hoped, can be measured in the ground at a later date. The present material is scanty and may not be wholly representative. Distortion renders exact statistical comparison with other series specious, except for a few criteria. This report is being written without benefit of comparative material. Despite these limitations it seems permissible to venture a few tentative conclusions.

- (1) The population represented by the Eridu cranial sample was Mediterranean, like that of present-day Iraq and its neighboring countries to East, West, and South.
- (2) Aside from sex and age differences, variations occurred in the size of the teeth and of the palate, and in

the width of the mandible. Some individuals were notably prognathous and large-toothed, their teeth are as large as those of Neanderthals. They seem to exhibit the survival of genes for an earlier evolutionary state in an otherwise racially homogenous population. One must not forget that although the first civilized people in the world, these citizens of Eridu lived seventy generations ago, and were not far removed in time from food gathering and coarse diets. Evolutionary status seems a far more reasonable explanation of this variation than race mixture, since evolution proceeds gene by gene, character by character while mixture affects many genes and characters at once. These people deviate from a Mediterranean norm in one feature only: the teeth. Perhaps this will also explain the presence of so-called "Australoid" features in some of the early crania from the Indus valley.

(3) Some of the crania have low, squarish orbits. How much of this is due to post-mortem deformation cannot now be determined. A few experiments in the mechanics of skull-squashing are needed.

(4) These people were heavy chewers, and eventually wore their teeth down to the gums. At that point caries

and abscesses set in, particularly in the molars. This may give a clue to their diet, and a study of their milling devices is indicated.

Although these conclusions appear at the moment the most reasonable, further excavations and studies may later invalidate them. They are offered only as a tentative aid to the racial identification of the Early Sumerians. Whether these people came to Southern Iraq from mountains, deserts, or other fertile plains is not revealed, since as far as we know the basic race of all this region is Mediterranean. Whether the Eridu people were brunet or blond we also cannot tell, even by the tenuous method of analogy, since Nordics and Mediterraneans are merely pigment phases of a single stock. That the genes of the Eridu population have survived among the modern Iraqis is more than likely.

In conclusion I wish to thank the Iraqi government, and particularly Naji Bey el-Asil and his assistants, for their hospitality and courtesy. Their permission to work on this priceless material was a favor which I greatly appreciate.

Signed, Carleton S. Coon

TABLE I

METRICAL CONSTANTS OF ERIDU CRANIA
 or?? signifies difficulty in measuring-
 Degree of possible distortion is not indicated
 + SM — Spare mandible

Number	201	181	f34	116	52	ZB	SMI	SMz
	Probably Female	Male	Male	Male	Probably Female	Male	Probably Male	Male
Sex:								
	Late						Se-	
Age:	Adult	Adult		Adult	18-20	Adult	nile	Adult
Horizontal circumference	496?	503	486	492	500	513		
Glabello-occipital Length	179	175	179	180	180	196		
Maximum Breadth	139	175	136	133	137	128		
Auricular Height	105	118	110	105?	108	118		
Basion-Bregma Height	108	122	119??	120	102	128		
Basion-Nasion Length	95	92	92?	100	83	100?		
Basion-Prosthion Height	91??	102	96??	106	90	102?		
Minimum Frontal Diameter	99	97	96	91	95	95		
Bizygomatic Diameter	124?	130	124?	124	120	121		
Bimalar Diameter	99?	102	99		89			
Bimastoid Diameter	120	128	125	117	115	115		
Left Orbit Height	27?	30?	28	31	22	34		
Left Orbit Breadth	38	40	38	42	37	37		
Right Orbit Height	—	30	28	33	20	34		
Right Orbit Breadth	—	40	40	43	38	40		
Biorbital Diameter	—	96	97?	95	92	91		

Interorbital Diameter	27	22	21	16	22	18		
Nasion-Menton Height		114	113	121	92			
Nasion-Prosthion Height	64??	69	64	74	57			
Nose Height	41??	48	50	54	39	64		
Nose Breadth	24??	26	25	24	22	25		
Foramen Magnum Length	34	33	—	33?	31			
Foramen Magnum Breadth	30	31	28	27	31			
Palate Length	53??	58	56	59	55	57		
Palate Breadth	65	70	62	62	61	61		
Mandibular Symphysis Height								
	30	33	31	36			31	33
Bicondylar Diameter	118	122	107	113			130?	120?
Bigonial Diameter	101	96	89	101			113	106?
Ascending Ramus Height	65	70	69		48		64?	66
Ascending Ramus Min-Diameter	33	35	36		28		36	36
Condylo-symphysial Length	123	127	127	133	108		138?	130
Dental Arc, Upper jaw		145?	133	142	147			
Dental Arc, Lower jaw	129	139	126	138	137?		153	144
Molars, Combined Lgth, Upper L.	30	32	30	30				
Molars, Combined Lgth, Upper R.	—	—	—	31				
Molars, Combined Lgth, Lower L.	34	—	—	34			36	33
Molars, Combined Lgth, Lower R.	33	—	—	—	—	—	—	36
Molars, Upper L, 1st Length	11	12	—	11	12			
Breadth	12	14	—	—	—	11	—	—
Molars, Upper L, 2nd Length	10	12	12	11	11			
Breadth	12	13	—	12				
Molars, Upper L, 3rd Length	9	9	11	—	—			
Breadth	11	12	10	10	—			
Molars, Upper R, 1st Length	12	—	13	10	12	11	—	—
Breadth	12	—	—	—	—	11	13	
Molars, Upper R, 2nd Length	11	12	—	12	12			
Breadth	12	13	—	11	14			
Molars, Upper R, 3rd Length	—	9	—	11	—			
Breadth	—	11	—	—	—			
Molars, Lower L, 1st Length	12	—	—	12	12		12	12
Breadth	10	—	—	—	11		11	12
Molars, Lower L, 2nd Length	12	—	—	11	12		12	11
Breadth	12	—	—	—	11		12	11
Molars, Lower L, 3rds Length	12	10	—	10	—	12	11	
	11	11	—	—	—		12	10
Molars, Lower R, 1st Length	11	12	—	—	12		12	12
Breadth	11	12	—	—	11		11	12
Molars, Lower R, 2nd Length	10	—	—	—	11		13	11
Breadth	12	—	—	—	12		12	11
Molars, Lower R, 3rd Length	10	11	—	—	—	12	11	11
Breadth	10	11	—	—	—		—	11
Incisors, Upper, Combined Br	30	—	—	30	32			
Incisors Upper, Breadth, L.								
lateral	7	—	—	7	7			
Incisors, Upper Breadth, L. median	8	—	—	9	10			
Incisors, Upper Breadth, R. median	8	—	—	9	10			
Incisors, Upper Breadth, R. Lateral	7	—	—	8	8			

Section B.

Geological Notes on Rocks, Fossils and Objects of Antiquarian Interest Excavated from the Ruins of Eridu

By

W. Rees Williams, B. Sc., F. G.S., Assoc Inst. M. M.
GOVERNMENT GEOLOGIST
November 1948

INTRODUCTION

Forty specimens were submitted for examination by the Director General of Antiquities on the advice of Mr. Seton Lloyd, the Technical Adviser of that Department.

All the specimens are of geological interest and in this investigation an attempt has been made to trace their provenance. In each case the specimen is identified, its particular geological formation given with its distribution in Iraq; when possible, specific areas are named. In cases where the particular geological formation does not occur in Iraq, possible sources in the borderlands are suggested.

In this report it was considered useful to give a general sketch of the geology of Iraq, the distribution of rock formations with some stratigraphical details.

Reference should be made to the 1,000,000 geological map of Iraq as found in "Water Supplies in Iraq", publication No. 1 of this department.

More detailed geological maps may be studied on application to the Director of Mines.

SKETCH OF THE GEOLOGY OF IRAQ

General Geological Structure of Iraq

The plains of the Euphrates and Tigris form a great structural valley or geo-syncline. In the south west occur broad bands of Cretaceous, Eocene, Miocene, and

Pliocene formations of limestone, marly clays, sandstones, beds of gypsum and salt, having a general and gentle inclination towards the north east with minor anticlinal and synclinal ripples, so that from the Cretaceous in the south west frontier with Arabia, younger formations are successively encountered until the mountainous zone of Iraq is reached. Within the actual valley of the twin rivers, these rocks are covered with a thick layer of alluvium which becomes thicker in a south easterly direction towards the Gulf of Arabia.

The mountain zone of Iraq is part of the Iranian arc, the easterly continuation of the Tauro-Dinaric loop of the Alpine system of folds in Europe. The loop, which runs down the eastern side of the Adriatic in a south-easterly direction from its origin, passes next through Greece and bands to the eastward to traverse Crete and Cyprus, from which it enters Asia Minor as the Taurus Range.

The mountain range is prolonged across the upper course of the Euphrates towards the mountain knot of Armenia, curving round gradually to the east. The main line of folding crosses the Tigris in the neighbourhood of Jezireh, north of Mosul and gradually bends, in a constant south easterly trend, through the Jolu and other ranges to pass into the Zagros Mountains; thus forming the north eastern boundary of Iraq and part of the so called Iranian arc of the Asiatic system of mountain folds.

Only a small part of this mountain system falls within

the boundaries of Iraq. It comprises part of the Liwas of Sulaimania, Arbil and Mosul and has a total area of 5,000 square kms.

Descriptions of the Divisions in the Mountains

Structurally, the mountain zone may be divided into:—

1. An autochthon zone of normal folds consisting mainly of a Triassic anticline of limestone and shales which lies along and in front of the Nappe Zone.
2. A zone of Nappe consisting of:—
 - (a) Radiolarites — this is a formation consisting mainly of cherts and shales with subordinate limestone.
 - (b) A Nappe of igneous and metamorphic rocks with sedimentary rocks. This can be divided into:—
 1. A bottom division consisting of shales, limestones, phyllites, marbles, masses of serpentines and volcanic agglomerates.
 2. A middle division consisting of shales, limestones with subordinate phyllites, marble and some massive quartz reefs.
 3. A top division consisting of epidiorites; an igneous gneissic schistose complex with intrusions of granitic rocks, pegmatites, apilites, quartz reefs, basic and ultrabasic rocks. Masses of serpentine are also found.

NOTES ON SPECIMENS

Specimens Nos. 1 and 2.

These are two pieces of off-white incipient marble. In No. 1 a hole has been drilled through one of the edges. This is stained with malachite — a copper carbonate — probably the remains or contact effect of some copper attachment, such as a copper wire.

Marble is brought about by the metamorphism of limestone rock caused by heat from igneous intrusions, or heat brought about by dynamic stresses of intense folding in mountain-building movements.

These particular specimens are contact altered incipient marbles — that is, the metamorphic action is not complete.

Marble rocks are found in Iraq only in the Nappe

Zone of Kurdistan where the limestones of the middle division of the nappe are found in contact with the igneous rocks of the top division or in contact with igneous intrusions from the bottom division. More rarely, some of the limestones of the bottom division have also been similarly affected.

It has been noted by the writer that in this country incipient marbles like these are found where the limestones have been intruded by isolated quartz reefs as found in the Hero-Halsho areas of Sulaimania Liwa.

Marble also occurs in the border lands of Turkey and Iran; crystalline rocks are known to occur in Saudi Arabia and might well include marble rocks.

Specimen No. 3

This is a rough truncated pyramid of quartzitic sandstone with a thick coating of malachite on parts of some of the faces, which at some points has penetrated the cracks in the quartzite. This malachite might be the remains of a thin copper foil or a thick malachitic paint.

Quartzitic sandstones are not uncommon rocks. They occur both in igneous and metamorphic regions as well as in areas of comparatively gentle geological structure.

A wide outcrop of quartzitic sandstones known as the Hauran Quartzites and Sandstones (named after the Wadi Hauran) is found in the desert extending from a point south of Rutba northwards towards the Euphrates, crossing the I.P.C. pipeline some 10 kms. West of H 1 and passing some 10 to 15 kms. north of the Ga'ara Depression whence it continues in a WNW direction into Syria. It is of Lower Cretaceous age.

More rarely isolated outcrops of quartzites occur in the northern mountains of Iraq — one such outcrop is found near Penjwin.

Recently a specimen of quartzitic sandstone, having a sheen which might be due to selenite, was brought into the laboratory. It was reported found in situ at a point about 40 kms. south of Faluja.

Specimen No. 4

White marble with a slight ferrogenous discoloration. This specimen differs from No. 2 in that metamorphism from limestone to marble is complete.

See remarks on Nos. 1 and 2.

It might have been collected from one of the larger masses of marble where this metamorphism is complete as at Darband near Ryat on the Rowanduz Road.

Specimen No. 5

This is a rough cone of limestone with bituminous paint on and around the base. Above and near this paint are found traces of malachite stains which might be due to contact with some copper object of attachment or is possibly the remains of a coating of malachitic paint.

Limestone is very widespread and common in this country. Practically the whole of the southern and northern desert together with most of the foothills in the north are composed mainly of limestone. Masses of limestone also occur in the mountainous regions of the country.

This particular specimen appears to be of Eocene age. Rocks of this formation sweep in a broad bend some 150 kms. wide (in the desert) from a point about 150 kms. south of Salman Fort in a north westerly direction across the desert around and north of the Ga'ara Depression into Syria.

Specimen No. 6

This is fossil coral limestone, the coral being of the family Cyathophyllidae.

Corals of this family are limited to rocks of Palaeozoic age with a distribution ranging from the Ordovician to Lower Carboniferous with a maximum development in the Devonian. Lithologically, the rock also appears to belong to the ancient rocks of Palaeozoic age.

The only known exposure of these rocks in Iraq is found in the Sirwan gorge but no limestone is known to occur there.

Palaeozoic rocks are found in Saudi Arabia, Turkey and Iran.

Specimen No. 7

This is a rough cone of black limestone — somewhat crystalline.

Crystalline limestones are usually found in the mountainous regions of the country, more especially the darker variety.

A bold scarp of similar black limestone occurs in the foothills of the Avroman mountains N.E. of Halabja.

Specimen No. 8

This is a pale yellow burnt clay brick.

It can be seen under the microscope that this specimen is mainly composed of fresh feldspars, some of which are slightly altered, a minor number of heavy ferro magnesium minerals and quartz crystals in a ground mass of clay.

A study in thin section of a modern brick made in Baghdad showed it to be composed mainly of smaller

crystals of feldspar, (few of which were fresh as in the feldspar seen in the specimen) with quartz and some heavy minerals — zircon, rutile etc. in a ground mass of clay.

The difference in the size and freshness of the feldspars might indicate that the clay was collected upstream, above Baghdad and nearer the mountains, or, that the clay was collected nearer the river and was thus subject to constant flooding and the deposition of coarser materials.

Specimen No. 9

A piece of mottled grey cherty crystalline limestone. A hole has been bored through one of the edges. It is still partly filled with sandy sediment stained with malachite, the latter might be due to contact with some copper attachment such as a wire.

Cherty limestones are found in the Radiolarites of the nappe zone; minor exposures are also found in the lowest division of the nappe. Grey cherty limestones are also found in the Triassic anticline.

Specimen No. 10

Green cherty shale.

Different coloured cherts, including green cherts are found in the Radiolarities and in the Triassic anticline of the Nappe Zone.

It may be remarked here that such a rock would not be found in the plains and foothills of this country.

Specimens Nos. 11, 18, 19, 20, 21 and 22

These are lamellibranchs of the families Ostracea,

Pectinedae, and Cardidae.

These lamellibranchs range from the Triassic to the present day.

None of the above specimens has ever been embedded in any consolidated strata or even semi-consolidated sediments. Specimen No. 23 is a fossil lamellibranch of the genera Veniella, which ranges from the Cretaceous to Tertiary.

This fossil both by age and appearance has obviously been embedded in consolidated strata — probably chalk.

All lamellibranchs are aquatic animals and by far the larger number are marine. The latter forms range from the shore line to a depth of 2900 fathoms, but are most abundant in shallow water and are scarce at a depth greater than 500 fathoms.

Lamellibranchs of the Ostracea and Pectinedae family are usually abundant from low water to a depth of 35 fathoms.

Specimens Nos. 12, 13, 14 and 15

These specimens are Gasteropods of the genera Murex, ranging from Eocene to present day.

Well known examples of gasteropods are the snail and whelk. Some gasteropods live on land, other in fresh water, but the majority are marine. They are found in seas in all parts of the world, but are especially abundant in warm regions and in comparatively shallow water.

This particular gasteropod is a marine type.

These specimens have never been embedded in consolidated or even semi-consolidated strata.

Specimen No. 16

Green fractured chert with veinlets of quartz.

Cherts of this description occur in the Triassic anticline of the Nappe Zone. Northwest of Khurmal, cherts are particularly abundant, vermilion, bright green, deep purple and very dark green. They are often shattered and brecciated and veined with white crystalline quartz, as in this specimen.

Specimen No. 17

This is pink crystalline limestone with a small curved hole bored through the flat side and still filled with sandy sediment but bearing no traces of copper stains. The pink colour is probably due to manganese.

By reason of its colour and crystalline nature, it is considered that such a limestone would not be found in the undisturbed limestone of the plains and foothills.

Limestones of similar colour are found in the Triassic anticline of the Nappe Zone and in the lowest division of the metamorphic nappe.

Specimens Nos. 24 and 25

These are thin slabs of burnt clay speckled and glinting with minute particles of selenite. Both slabs effervesce freely with the application of dilute hydrochloric acid from which fact it is concluded that the clay was collected from the marly clays of the lower part of the Upper Fars or some-where near and downstream where alluvium would be deposited from this horizon of the Fars.

Specimen No. 26

This is quartz sandstone. On some faces of the specimen appears a glint or a sheen which might be due to the presence of selenite particles.

See note on Specimen No. 3.

Specimen No. 27

This is quartz diorite with traces of malachite on the surface, probably due to contact with some copper object.

Rocks like these specimens occur only in the top division of the igneous and metamorphic nappe zone, such as in the Panjwin, Hero and Haisho, Choarta masses in the Sulaimania Liwa.

Specimen No. 28

This is off-white gypsum.

Thick beds of gypsum are found in the Lower Fars and are seen in almost all places where this formation outcrops, as at Mosul, Wadi Tharthar, and many other places.

Specimen No. 29

This is granodiorite.

A hole has been drilled through one of the edges of the specimen; there is no trace of copper in this hole.

Granodiorite is found in the top division of the metamorphic and igneous division of the nappe zone, minor intrusions are sometimes found in the lowest division of the nappe. It is also found in the borderlands of Turkey and Iran and probably in the crystalline basement rocks of Saudi Arabia.

Specimen No. 30

A granular impure crystalline limestone or marble.
See notes on specimens No. 1, 2 and 4.

Specimen Nos. 31 and 34

These are angular pebbles of ferrogenous quartz.

Quartz reefs are only found in the Nappe Zone of this country. They are found intruded in all three divisions of the metamorphic and igneous nappes. These reefs are not always pure and are sometimes discoloured with manganese or chlorite etc.

Such pebbles as the specimens are found below these quartz reefs, in recent terrace deposits in valleys, gorges and streams. They are also found in abundance in the Bakhtiari Conglomerate of the Upper Fars, more rarely, thin bands are also found interbedded with the marls and sandstones of the Upper Fars. These latter deposits are, in their turn, subjected to erosion and the pebbles are carried into the main rivers of the country, the Little Zab and Greater Zab, the Diyala river and the Tigris.

It would appear, therefore, that such pebbles are widely distributed.

Specimen No. 32

This is a "liver-coloured" chert. Cherts of similar colour are found in the Radiolarites and in the Triassic anticline of the Nappe Zone.

Nodules of chert are found strewn over the southern desert in the area of Salman and Schibicha. These cherts however, always show concentric layers indicating the growth of the chert in the limestone cavity where it was originally formed. This particular specimen does not show any such concentric layers. Therefore it cannot have been collected from the desert.

The radiolarian cherts and shales belong to a belt of similar rocks in the Jurassic which extends from the Alps, through the Dinarids and Taurus, Iraq Kurdistan and south western Iran to Bunder Abbas and is also found in Oman.

Specimen No. 33

This is a pebble of white reef quartz, round and well waterworn.

See general remarks for Nos. 31 and 34.

This pebble, however, is well rounded by water action and would have been transported, deposited, re-transported and re-deposited many times, being carried a hundred miles or more from the original reef.

Therefore, it can be supposed that the pebble could not have been collected from any part of Iraq beyond the foothills of the mountains.

Specimen No. 35

This is a broken angular pebble of clear rock crystal quartz.

Such clear rock crystal quartz is not found in the widespread manner described in notes on No. 31, 33 and 34. It occurs, rather in restricted localities. One such area is found along the southern slopes of the mountains of Kurakazhaw and at places east of Barzinja, about 15 miles S.S.E. of Choarta. Here, water-clear, double ended crystals of quartz are picked up quite frequently after the snows melt or after rain. They have weathered out of the limestone and are washed out of the overlayer of soil. The local people believe that they have fallen from the skies like hail. These crystals are never more than 1 to 2 inches long.

Specimen No. 36 and 37

Two specimens of what appears to be glassy volcanic lava or black glass.

Rocks that from the nature of their environment were caused to cool rapidly are in great measure or entirely composed of glass. There is, naturally, every gradation between rocks that consist wholly of glass and those which are completely crystalline.

The glassy base of even a vitreous rock is seldom completely devoid of crystalline material. Examined with a microscope, it is often found to contain numerous minute, spherical, rod-shaped and hair-like bodies, which represent the first products of crystallisation. In addition to these crystallites there are small needle and rod shaped bodies which are known as microlites. They are distinguished from crystallites by the fact that they react on polarized light. Both types are found in the sections made from No. 37. From this evidence it would appear that the specimens are volcanic lavas.

On the other hand it is known that glass under certain conditions may through the ages, acquire a similar crystalline structure by a gradual process of crystallization.

Specimen No. 37 shows a certain concentricity of structure as though the glass had been poured into a mould.

It is also difficult to believe that the ancient people had tools sufficiently hard to grind and fashion a hard brittle substance like glassy volcanic lava into the shape of a vessel.

The evidence would therefore suggest that the specimens are in effect black glass made by man.

It may be remarked that glassy lavas are associated with regions of comparatively young and recent volcanoes. Such volcanoes are not found within the borders of Iraq. Young lava flows may however be seen in Syria near the Damascus road and again to the N.E. near the border of Iraq.

Specimen No. 38

This appears to be a piece of secondary gypsum.

Such secondary gypsum is found as an encrustation near gypseous scarps of the Lower Fars and in the sub-soil. Similar specimens have been obtained from the borings of the Wadi Tharthar.

Specimen Nos. 39 and 40

Under the microscope both specimens are similar in appearance to present day wind-blown sand. Both contain quartz and heavy minerals like zircon, rutile, tourmalin etc. but No. 39 contains more quartz than No. 40 and little or no gypsum, calcite and anhydrite, the grains of the latter, (gypsum, calcite and anhydrite) are bigger and of very uneven sizes.

Generally, No. 40 looks more like the sand of the present day sand dunes found west of Samawa and the Euphrates in the south.

No. 39 is a fine, clean well graded sand and not as brown as No. 40 and the sand dunes mentioned above.

It is suggested that No. 39 has been, at some time, subjected to the action of clear moving or running water.

Section C.

BOTANICAL SAMPLES

A specimen of Carbonized grain from Eridu

Estimated date 4th millennium B.C.

Iraq museum reference number Eridu 751

BY

J. B. GILLET

Botanist — Dept. of Agriculture — Baghdad

by the hulls. Most of these hulled grains are asymmetrical indicating that the Barley was probably of the 6-rowed type (*Hordeum hexastichon*). They are smaller than is usual in modern Barley, the greatest length measured being 6.5 mm.

Specimen 751 B has the hull adhering on the ventral face only. This shows that the Barley has a tendency to shed its hull and is thus of the naked grained type. If this be correct it suggests that the remaining naked grain, which forms the greater part of the specimen may also be naked grained Barley. These grains are plumper and more rounded in outline and shorter (5 — 5.5 mm) than any Barley with which I am familiar and taken by themselves rather resemble a small-grained wheat of the *Triticum vulgare* group, in particular Indian dwarf wheat *Triticum sphaerococcum*. The obscurity of the ventral groove at first sight casts some doubt on the identification of these grains as either Wheat or Barley. However, as pointed out above, the groove was probably really present originally and became gummed up in the process of partial decay which the grain has undergone. The following passage from Tackholm and Drar 'Flora of Egypt' Vol. I, p. 285-6 seems relevant to the point under discussion. 'As a matter of fact, the ancient naked barley is smaller in size than the naked Barley grown at present in Egypt. A Schulz finds it most closely related to the 6-

The specimen consists of an irregular mass of carbonised grain cohering together, about 4 cm in diameter. The individual grains are often distorted, some are indented, apparently by pressure from adjacent grains, some are hollow, and from most a gummy substance, now-hard and carbonised, seems to have oozed out under pressure, as may clearly be seen in, for instance, grain no 751 C. It must be concluded from this that, at some time or other the grain was damp and a process of decay led to the production of a gummy liquid and of gases which forced the liquid out of the grain under pressure. The black gummy exudate seems in many cases to have blocked up and obscured the groove on the ventral surface of the grain and it is possible that the shape of the grains has been distorted by distension due to the pressure of gas within them. Both these points are very relevant in identifying the grains.

A minority of the grains (e. g. 751 A) are easily determined as *Hordeum* (Barley) as the characteristic hulls (Lemma and Palea) are still adhering and sometimes the Rachilla may be seen on the ventral face. Those grains have the narrow lanceolate shape typical of *Hordeum* in contrast to the much more oval, plumper naked grains to be considered later. It is possible that the hulled grains kept their shape better when the naked grains were distended owing to the extra strength given

rowed type *H. hexastichum* v. *revelatum*. In most cases it is very difficult to distinguish the often carbonised grain of ancient naked Barley from grains of ancient naked wheat or threshed Emmer. The oldest find of naked barley originates from Neolithic settlements in the Faiyum. It will be seen that this passage supports the view that the grain now under consideration may be naked Barley, in spite of its wheat like appearance.

In favour of the alternative hypothesis that at any rate some of the naked grains such as 751 C,D,E, and F belong to small grained races of wheat related to *T. vulgare* such as *T. compactum* and, especially *T. sphaerococcum* we have the fact stated in Percival 'The Wheat plant' p. 307 that a small grained form of *T. compactum* was common in neolithic times in Europe. Both these races (*Compactum* and *Sphaerococcum*) are known in recent times in southern Iraq while the modern naked Barleys seen from Iraq are widely different from the Eridu specimens. Tackholm and Percival agree however that there is no conclusive evidence that wheat of this type was known in ancient Egypt before Crecece Roman times.

Summing up we may conclude:

- (1) Specimen 751 definitely contains Barley, *Hordeum* sp.
- (2) This Barley, or at any rate some of it, was probably of the 6-rowed naked type *H. hexastichum* v. *revelatum*.
- (3) There may be also present grains of a small grained wheat related to *Triticum vulgare* such as *T. compactum* var *globiforme* or *T. sphaerococcum*.

A specimen of woven fabric from Eridu

Date 4th millennium BC

The cloth was neither cotton nor wool but made of a stem fibre, in all probability Flax, *Linum usitatissimum*.

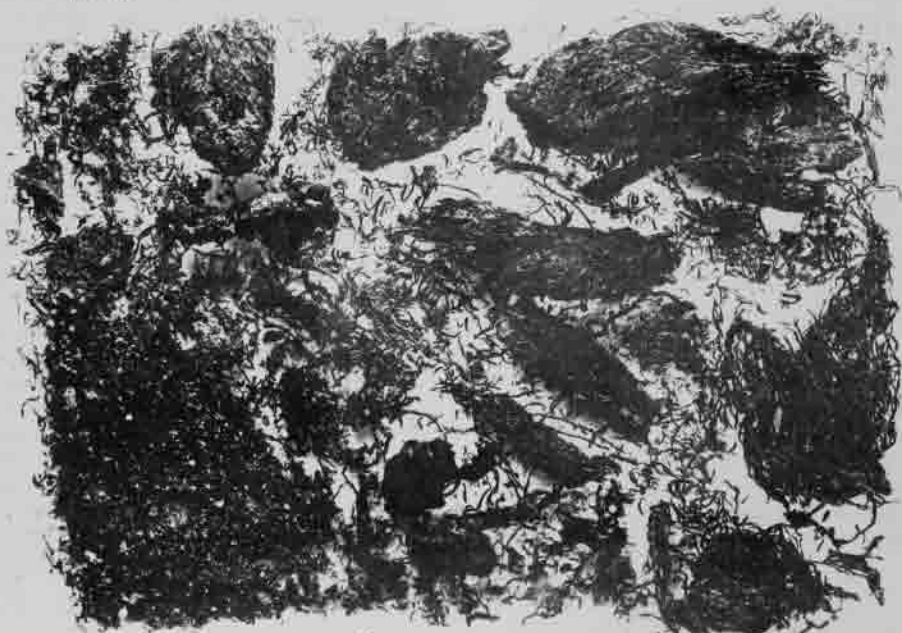
Date stones from Eridu

Date 4th millennium BC

Undoubtedly date stones, *Phoenix dactylifera* L. I am unable to say whether anything can be inferred about the variety.

(J. B. Gillett)
 Botanist
 Dept. of Agriculture
 Baghdad — Iraq

FIG. 160



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COLOUR PLATES

PLATE 1

1. IM. 55023 — Cup, painted in dark brown with geometrical design conical shape, egg-shell ware.
12 x 3.5 cm (Eridu).
2. IM. 54833 — Dish shallow, painted in black with geometrical design, 19.5 x 4.5 cm (Eridu Temple XVI/XVII).
3. IM. 54835 — Shallow dish, oval shape, painted in brown with geometrical design, 30 x 20 x 5 cm (Eridu Temple XVII).
4. IM. 54824 — Vessel, cylindrical shape, painted in black with geometrical design, 15.0 X 8.2 cm (Eridu Temple 16).

PLATE 2

1. IM. 54826 — Vessel, cylindrical shape, painted in black with geometrical design. 11.5 x 7.0cm (Eridu Temple IX)
2. IM. 54828 — Cup, conical shape, painted in chocolate with geometrical design, 12.0 X 13.0 cm (Eridu, R17 T. VI).
3. IM. 54822 — Cup, egg-shell, conical shape, painted in chocolate with geometrical design. Ubaid period. 13.5 X 60. cm (Eridu Temple IX)
4. IM. 54823 — Cup, egg-shell ware, conical shape, painted in chocolate with geometrical design. Ubaid period. 5.0 X 1.15 cm (Eridu Temple IX).

PL. 1

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PL. 2

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PLATE 3

1. IM. 54889 — Dish, plain egg-shell ware shallow shape. Ubaid period. 21. 3 X 5.8 cm (Eridu).
2. IM. 55017 — Incense cover. 29.5 X 28 cm (Eridu).
3. IM. 55013 — Cup, painted in black with geometrical design, hemispherical shape. 10.6 X 5 cm (Eridu, Temple VII).
4. IM. 54821 — Cup, egg-shell ware, conical shape, painted in dark brown with geometrical design. 6.0 X 12.3 cm (Eridu Temple IX) Ubaid period.

PLATE 4

1. IM. 54863 — Dish, shallow, with geometrical design in brown paint. Ubaid period. 22 x 5.2cm (Eridu, grave 162).
2. IM. 54872 — Dish, shallow, painted in black with zoomorphic? designs. Ubaid period. 25.2 X 7.5 cm (Eridu, grave 153).
3. IM. 54882 — Dish, shallow, painted in brown with geometrical design, Ubaid period. 13.5 x 40cm (Eridu, grave 169).
4. IM. 54862 — Dish, painted in brown with geometrical design. Ubaid period. 15 X 55 cm (Eridu, grave 152)

PL. 3



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PL. 4



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PLATE 5

1. IM. 54840 — Dish, hemispherical shape, painted in black with geometrical design. Ubaid period. 25 X 7.5 cm (Eridu, grave 82).
2. IM. 54852 — Dish, shallow, painted in black with wavy lines. Ubaid period. 23x5.0 cm (Eridu, grave 159).
3. IM. 54784 — Cup, demi-conical shape, painted in dark brown with floral design. Ubaid period. 10.5 X 15.6 cm. (Eridu, 128).
4. IM. 54810 — Jar, conical shape, geometrical design, brown paint. Ubaid period. 10.5 X 8.5 cm (Eridu, grave 169).

PLATE 6

1. IM. 54741 — Jug, painted in black with geometrical design. 20 X 16.5 cm (Eridu, grave 109).
2. IM. 54813 — Jar, oval shape, painted in chocolate with geometrical design. Ubaid period. 21 X 28 cm. (Eridu Ubaid's settlement).
3. IM. 55025 — Jar, spherical shape, painted in black with geometrical design. Ubaid period. 12 X 19.3 cm. (Eridu, Grave 3).
4. IM. 54811 — Jar, oval shape, painted in chocolate with geometrical design. Ubaid period. 15.3 x 11.3cm. (Eridu, grave 54).

PL. 5

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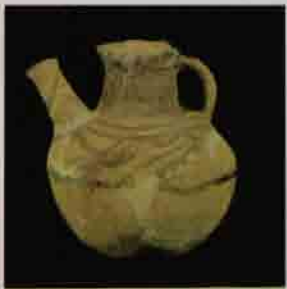


4



PL. 6

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PLATE 7

1. IM. 54790 — Cup, conical shape, painted in black with floral design. Ubaid period. 10.9 X 13.5 cm (Eridu, grave 152).
2. IM. 54783 — Cup, conical shape, painted in black with linear and floral design. Ubaid period. 11.4 X 16.0 cm. (Eridu, grave 159).
3. IM. 54782 — Cup, conical shape, painted in dark brown with linear and floral design. Ubaid period. 11.1 X 15.3 cm (Eridu, grave 181).
4. IM. 54814 — Cup, painted in chocolate with floral design. Ubaid period. 14.4 X 14.6 cm (Eridu, grave 152).

PLATE 8

1. IM. 54795 — Cup, painted in black with linear bands. Ubaid period. 11.0 X 10.5 cm (Eridu, grave 190).
2. IM. 54794 — Cup, painted in black with geometrical design. Ubaid period. 10.5 X 9.8 cm (Eridu, grave 60).
3. IM. 54808 — Cup, hemispherical shape, painted in chocolate with geometrical design. Ubaid period. 10.5 X 16.5 cm (Eridu, grave 50).
4. IM. 54806 — Bowl, painted in brown with geometrical design. Ubaid period. 9.5 X 11.5 cm (Eridu, grave 129).

PL. 7

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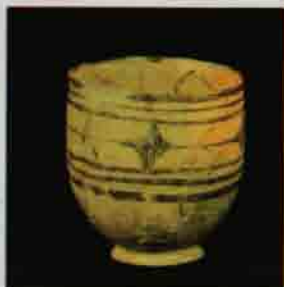


PL. 8

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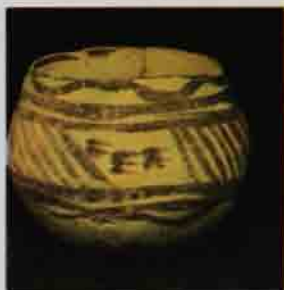


PLATE 9

1. IM. 54805 — Cup, painted in dark brown geometrical design. Ubaid period. 10.5 X 12.8 cm (Eridu, grave 53).
2. IM. 54836 — Vessel, oval shape, painted in black. Ubaid period. 9.5 X 19.5 cm (Eridu, grave 14).
3. IM. 54801 — Cup, painted in dark brown with geometrical design. Ubaid period. 11.7 X 1.0 cm (Eridu, grave 87).
4. IM. 54785 — Cup, painted in black with floral design. Ubaid period. 10.5 X 5.8 cm (Eridu, grave 132).

PLATE 10

1. IM. 14728 — Painted pot, complete. 14 X 10 cm (Arpachiya).
2. IM. 14789 — Painted bowl, complete. 30.5 X 11 cm (Arpachiya).
3. IM. 14788 — Painted bowl, complete. 27.4 X 11 cm (Arpachiya).
4. IM. 14804 — Painted vase. 14 X 12 cm (Arpachiya).

PL. 9

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PL. 10

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PLATE 11

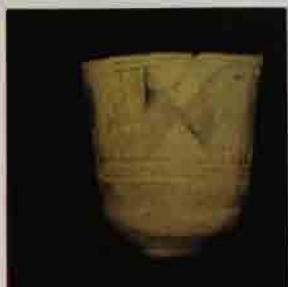
1. IM. 14793 — Painted tumbler. 12.5 X 11 cm. (Arpachiya).
2. IM. 45075 — Painted pot, with black painted design; having lug handles. 25 X 15.3 cm. (Arpachiya, surface find).
3. IM. 26662 — Jar, painted, badly broken. 51.2 X 55.2 X 51.3 cm. (Tepe Gawra).
4. IM. 32661 — Jar, black painted, brown ware, buff slip. 15.0 X 17.5 cm. (Tepe Gawra).

PLATE 12

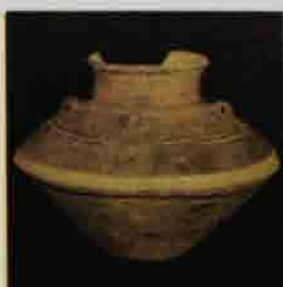
1. IM. 20855 — Bowl, fragments, painted. 19 X 17 X 5 cm. (Tepe Gawra).
2. IM. 60773 — Bowl, spheroid shape, painted in black. 147 X 95 cm. (Teloul Thalathat).
3. IM. 60728 — Jar, painted in black with plain band over wavy line, green ware. 17.0 x 16.0cm. (Teloul Thalathat).
4. IM. 60133 — Dish, hemispherical shape, painted in dark-brown. 9.0 x 27.5 cm. (Kamarian L. 6).

PL. 11

1



2



3



4



PL. 12

1



2



3



4



PLATE 13

1. IM. 22464 — Large plate, painted in black with exception of bottom. 35.5 X 10 cm. (Al-Ubaid)
2. IM. 8587 — Bowl, painted rim and inside. 24 X 7.5 cm. (Al-Ubaid).
3. IM. 8585 — Bowl, rim painted black, incised decoration. 21.5 X 8 cm. (Al-Ubaid).
4. IM. 8555 — Painted cup. 10.5 X 10 cm. (Al-Ubaid).

PLATE 14

1. IM. 8578 — Painted pot. 9 X 21 cm. (Ur).
2. IM. 285?? — Jar, drab clay, greenish, wheel made. 15 cm. high. (Ur).
3. IM. 498 — Pot, painted in black with geometrical design, Ubaid period. 14 cm. high (Ubaid).
4. IM. 8580 — Painted bowl. 13 X 10 cm (Ur, Telloh).

PL. 13

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3



4



PL. 14

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4



PLATE 15

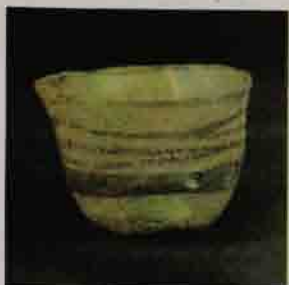
1. IM. 319 — Deep bowl, brown paint buff ware, flat base. Site? Size?
2. IM. 8579 — Painted tumbler. 10 X 18.5 cm. (Ur).
3. IM. 284 — Jar, green clay, roughly. 16 cm. high. (Ur).
4. IM. 8582 — Painted bowl: 14 X 11 cm. (Ur, Telloh

PLATE 16

1. IM. 47820 — Bowl, Ubaid ware, painted in black (Room G. street IV No. 27 Uqair). 9 x 14.2 cm.
2. IM. 47826 — Small cup with black painted. (Ubaid house, Room G. street IV. 119, Uqair). 8 X 8.4 cm.
3. IM. 47819 — Bowl, typical, Al Ubaid type, black painted design, thin ware. Ubaid house, level I, street IV No. 61 Uqair. 9 X 13.7 cm.
4. IM. 47823 — Dish, with painted design in black. Rough ware. (Ubaid house, street IV No. 88 Uqair). 21.5 X 10.0 cm.

PL. 15

1



2



3



4



PL. 16

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2



3



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PLATE 17

1. IM. 47793 — Large Urn, typical Ubaid period. (Ubaid house, Level I street IV No. 58 Uqair). 25 x 27 cm.
2. IM. 47821 — Bowl, Ubaid ware, painted in black. (Room C, street IV No. 66 Uqair). 8 X 9 cm.
3. IM. 47827 — Cup with conical shape, and black painted design. (Ubaid house level I street IV, No. 121 Uqair).
4. IM. 47828 — Urn, black painted design, Ubaid ware. (Ubaid house, level I, street IV, No. 108 Uqair). 13.5 X 11.0 cm.

PLATE 18

1. IM. 47794 — Jug, Ubaid period. (Debris of level III of Ubaid trench street IV No. 30 Uqair). 30 X 52 cm.
2. IM. 54827 — Vessel, cylindrical shape, painted in chocolate. Ubaid period, Eridu Temple XVI? 13.5 x 8.8 cm.
3. IM. 63954 — Small Jar, painted in black with geometrical design. (Ras al-Amiya). 7 X 7.5 cm.
4. IM. 63957 — Bowl, painted with floral design of brown colour. (Ras al-Amiya). 11.3 x 21.7 cm.

PL. 17

1



2



3



4



PL. 18

1



2



3



4



PLATE 19

1. Painted sherds from Temple VI.
2. Painted sherds from Temple VII.
3. Painted sherds from Temple VIII.
4. Painted sherds from Temple IX.



1



2



3



4

PLATE 20

1. Painted sherds from Temple X.
2. Painted sherds from Temple XI.
3. Painted sherds from Temple XII.
4. Painted sherds from Temple XIV.

PL. 20



1



2



3



4

PLATE 21

1. Painted sherds from Temple XVI.
2. Painted sherds from Temple XVII.
3. Painted sherds from Temples XVIII-XIX.



1



2



3

PLATE 22

1. Painted sherds from Levels I and II Hut Sounding
2. Painted sherds from level III Hut Sounding
3. Painted sherds from level IV Hut Sounding
4. Painted sherds from level V Hut Sounding



1



2



3



4

PLATE 23

1. Painted sherds from level VI Hut Sounding
2. Painted sherds from level VII Hut Sounding
3. Painted sherds from level VIII Hut Sounding
4. Painted sherds from level IX Hut Sounding

(including some painted sherds of Qaal't Hajji Muhammad type this level is a hiatus level most probably cut from the original Eridu Mound to make a terrace for level 8 in the Hut Sounding.



1



2



3



4

PLATE 24

1. Painted sherds of the Qal'at Hajji Muhammad type from the Site Qal'at Hajji Muhammad.
2. Painted sherds of the Qal'at Hajji Muhammad type from the site of Ras al-Amiya.
3. Ubaid painted sherds from the site Tell Abada (Himrin Dam project).
4. Ubaid painted sherds from the site Tell Abada (Himrin Dam project).
5. Samples of Uruk Gray and Red ware.





1



2



3



4



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فؤاد سيف
محمد علي مصطفى
س. لويد

أريديف

الجمهورية العراقية
وزارة الثقافة والآثار
المؤسسة العامة للآثار والتراث - بغداد

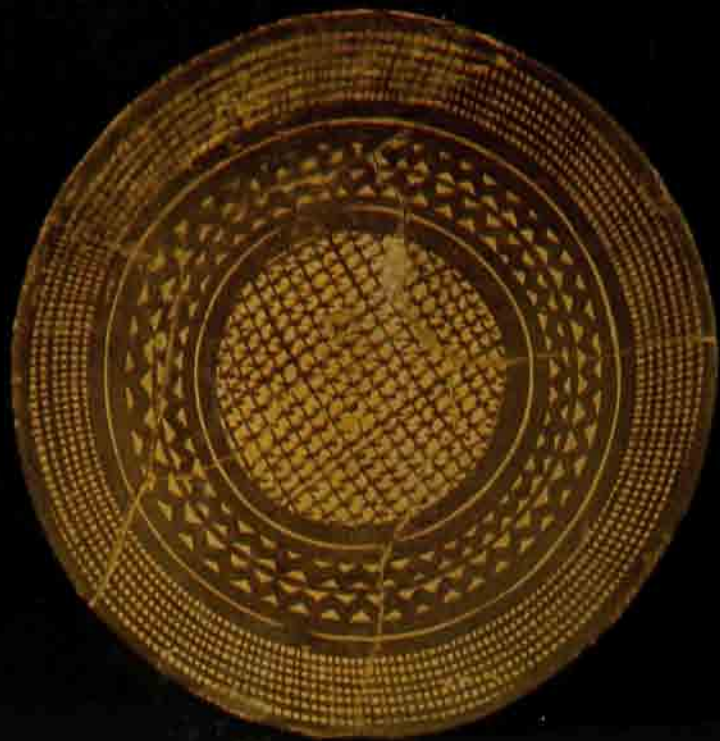


حقوق الطبع محفوظة للمؤسسة العامة للآثار والتراث - بغداد .

عبد

أريدو

رقم الابداع في المكتبة الوطنية ببغداد ١٠٤٦ لسنة ١٩٨٢



فؤاد
محمد علي شريف
س. لوي

أريفا



الجمهورية العراقية والأوقاف والإسلام
المؤسسة العامة للآثار والتراث - بغداد