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PARTHIAN POTTERY FROM SELEUCIA
ON THE TIGRIS

# PARTHIAN POTTERY FROM SELEUCIA ON THE TIGRIS 

NEILSON C. DEBEVOISE

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## PREFACE

Continuity is essential to an understanding of historical development whether in the field of arts, or politics, or philosophy. Lacunae in history lead to misunderstanding and incorrect attribution of new ideas and new patterns. In the history of the Near East, the birthplace of so many forces still active in our daily life, two serious obstacles have long blocked attempts to provide a continuous narrative of man's development in that part of the world. These are our lack of knowledge of the Parthian and Sasanian periods. With the recent revival of interest in the history and the art of Persia, the necessity for a better understanding of the Sasanian epoch has been so obvious that a start has been made along this line. But the Sasanidae cannot be properly appreciated without an adequate history of their predecessors, the Parthians, and toward this very little has been accomplished. We must know at least as much of the peoples of the later Orient as we do of the earliest Sumerians, and to this end I hope this volume and a history of Parthia upon which I am now engaged will at least add a little to our knowledge of these, the Dark Ages of the Near East.

A word of caution must precede this volume. Let the reader keep in mind that this material is from the city of Seleucia on the Tigris, for some centuries the cultural center of the Hellenistic life in the Land of the Two Rivers. It may be regarded as representative of Parthian ceramic art only in the far western part of the vast empire in the period after the invasion of Mesopotamia until the downfall of the Parthians. In the light of our present knowledge Parthian ceramics on the central Iranian plateau bear little if any relation to the material here presented, but with the exception of Susa we have little information from east of Iraq. Excavations are now under way which should give us a comprehensive view of Parthian culture in the eastern and central parts of the Empire. On the other hand ceramic material from Seleucia, where a large and cosmopolitan population was gathered and where great quantities of pottery have been recovered, seems to provide us with a satisfactory picture of Parthian ceramics in Mesopotamia which includes nearly all the types found at sites as far south as Nippur and as far north as Samarra.

At Seleucia the large number of vessels which were recovered intact or of which a drawing shape remained amounting to more than $1,59^{2}$ during two seasons alone (1930-32), made the publication of all of them unwise if not impossible. The pottery was therefore carefully grouped under types, and only those which are obviously due to the vagaries of the potter were passed by, without being classed as a new type. The descriptions of the pottery have been carefully checked with the vessels themselves. Obviously under this system examples better than the type pot would often be discovered later, and for this reason many of the photographic plates are not type vessels, but examples under a type, as indicated.

In a collection of pottery which varies from 0.9 cm . to 121.0 cm . in height, the adoption of a uniform scale for drawings is nearly a physical impossibility. In view of the small format of this volume and the desirability of placing the text opposite the line drawings, a larger number of scales have been utilized than would otherwise be advisable.

Friends in the museums and universities of America and Europe have contributed aid in many ways in fashioning this volume, and though especial mention must be confined to those most concerned with the work, there are many others whose assistance has not been forgotten. Professor Leroy Waterman, under whom I worked at Seleucia during the season 1930-3I, and Mrs. Waterman, who prepared the field drawings in 1931-32, have always been ready to contribute their time and advice. The Committee of the Institute of Archaeological Research of the University of Michigan in charge of this publication, Professors Campbell Bonner, J. G. Winter, B. D. Meritt, and Dr. F. E. Robbins, assistant to the president, have been placed under unusual difficulties by the fact that, with the exception of the summer of 193I, I was in the Near East engaged in excavation work during the preparation of this volume. The editor of the Graduate School Publications, Dr. Eugene S. McCartney, also had to assume additional burdens for the same reason. The publication of this volume under the auspices of the University of Michigan was made possible by the Institute of Archaeological Research and the Executive Board of the Graduate School.

A special grant was made in 1929 by the director of the Oriental Institute, Professor J. H. Breasted, to enable me to study Hellenistic, Parthian, and Sasanian material in the United States, and since this was largely pottery, the present study had its inception through the generosity of Professor Breasted. The work was continued in England, France, and Germany in 1930 on a grant made by Professor Waterman.

To Mr. Robert J. Braidwood, who prepared all the sketches, line drawings, and a large part of the field drawings in 1930-3I, I am especially indebted for continued interest and much expenditure of effort. As a result of five seasons with the Expedition at Seleucia, Mr. Samuel Yeivin was able to offer many suggestions of great value, and he also generously made available his report on the material from the graves. All members of the field staff of the Expedition, especially Dr. Robert McDowell, to whom I am indebted for aid with the numismatic evidence, made suggestions in the course of the seasons' work. Miss Julie Michelet, keeper of Muhammadan Art at the Art Institute, Chicago, spent many hours in discussions with me upon general problems of ceramic technique. Professor C. W. Parmelee, head of the Department of Ceramic Engineering, University of Illinois, read the chapter on glaze, and both he and Professor R. K. Hursh, of the same department, made valuable suggestions.

Dr. H. Frankfort, director of the Iraq Expedition of the Oriental Institute, was good enough to look over the material and offer several suggestions. The officials and staffs of the Museum of the University of Michigan, the Art Institute of Chicago, the Museum of the University of Pennsylvania, the British Museum, the Louvre, the Staatliche Museum, Berlin, the National Museum, Istanbul, and the Syrian National Museum, Damascus, have all contributed time and effort. Mr. BlakeMore Godwin of the Toledo Museum of Art and Mr. A. R. Lufti of the Iraq Museum, Baghdad, Iraq, and staffs of their museums have spent many hours of hard work in order to make available material previously excavated.

Professor A. T. Olmstead, now of the Oriental Institute of the University of Chicago, was directly responsible for my interest in things Parthian, and to him I owe a great debt of gratitude. My wife, Martha K. Debevoise, spent many hours of work upon the tedious preparation of manuscript and plates and has contributed many suggestions now embodied in the text.

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"The immortal baked clay preserves the trace of human habitation when all else has returned to the dust it was . . . the mud walls disintegrate and nothing remains but the imperishable pot. You may break him up as much as you choose, but unless you take a hammer to him and reduce him systematically to powder, he will continue to bear witness to the household which he served."
- The Letters of Gertrude Bell
"For the archaeologist there is neither clean nor unclean. . . . He is doubly blest, for when the outcome is beautiful to the eyes he returns thanks; but, whatever the result, it is sure to furnish him with some new and unexpected link between one art and another, and to provide him with a further rung in the ladder of history. He is thus apt to be well satisfied with what he sees, and above all, he does not say : 'Alas, alas! these dogs of Syrians! Phidias would have done so and so. . . .'"
- Gertrude Bell, Syria, the Desert and the Sown


## I. HISTORY OF THE SUBJECT

## EXCAVATIONS OF SITES WITH PARTHIAN LEVELS

Although many ancient sites such as Babylon, Asshur, and Nippur were still occupied as late as the Parthian period, such trivial objects as old pots and fragments of jars held no attraction for men who sought great bulls of stone and clay tablets which told of earlier days. They had not yet learned that pots as well as tablets must be translated and that a sherd may be made to speak as eloquently as a tablet if we but learn its tongue.

Among the early excavators who first recognized pottery of the Parthian period was William K. Loftus. In the course of his excavations at Warka about 1850 he found certain burials, usually in glazed clay slipper coffins, which contained pottery of characteristic Parthian shapes. It was often covered with a heavy green glaze and occurred in association with coins of the Arsacid monarchs. ${ }^{1}$ Gold jewelry, clay statuettes, and ornamental plaster almost identical with similar material from the Parthian levels of Seleucia were also found by Loftus at Warka.

Between 1888 and 1900, in the course of the excavations conducted by the University of Pennsylvania at Nippur under the direction of J. P. Peters, W. H. Ward, and, later, H. V. Hilprecht, one or more Parthian levels were cleared. ${ }^{2}$ Large amounts of pottery both glazed and unglazed and numbers of slipper coffins were found ; ${ }^{3}$ many specimens of pottery and several coffins were brought back to the United States. ${ }^{4}$

As early as 1899 , under the leadership of Robert Koldewey, the Deutsche Orient-Gesellschaft began excavations upon the great
${ }^{1}$ W. K. Loftus, Travels and Researches in Chaldaea and Susiana, pp. 203-215.
${ }^{2}$ H. V. Hilprecht, Explorations in Bible Lands, pp. 313, 422 ff., 501 ff., 555 ff.; J. P. Peters, Nippur, II, II 2, I44, 186, and Pls. VII, 1-5; VIII, 6.
${ }^{3}$ Hilprecht, Explorations, photograph facing p. 326; pp. 422-423.
${ }^{4}$ At present on exhibition at the University of Pennsylvania Museum. Unfortunately it is now impossible to determine with accuracy the provenance of this material ; see Leon Legrain, Terra-Cottas from Nippur, p. 3.
mounds, which are all that remain of the mighty city of Babylon. The Parthian occupation covered the larger part of the mounds, especially Amran and Merkes, where buildings and objects very similar to those from Seleucia were discovered. The upper levels were thickly populated, but only a small proportion of the material found there has thus far been published. ${ }^{1}$

Early in the work of the French Mission Scientific en Perse at Susa, begun in 1900, the excavators passed through a Parthian level. In the first meter below the surface, pottery with characteristic shapes and covered with a dark green glaze was discovered. ${ }^{2}$ Parthian coins and other objects from this period are still found on the site.

Excavations were begun by the Deutsche Orient-Gesellschaft at Kal'at Sherkat, ancient Asshur, in 1903 and were continued until 1914. Three Parthian levels were excavated, and the façade of a large Parthian palace found there has been reërected in the new architectural museum in Berlin. ${ }^{3}$ Little information on the ceramic material from the Parthian levels has thus far been published.

In igI3 at Samarra a number of Parthian graves were uncovered. ${ }^{4}$ They contained a variety of pottery both glazed and unglazed, the forms of which bear obvious relation to the vessels from Seleucia. Unfortunately, since this material comes from graves, it is impossible to date it definitely to any particular period of the Parthian era, although the bulk of it is probably late.

Excavations at Tel Uhaimir, the ancient Kish, were begun in 1922 under the guidance of M. E. Mackay and were later directed by C. Watelin, with the support of the Field Museum of Chicago and Oxford University, England. Although the principal excavations are on a site which does not seem to have been occupied during the Parthian period, there are a number of Parthian sites in the vicinity, and from these objects have come through purchase from the Arabs or from trial trenches. Little Parthian ceramic material has as yet arrived in Chicago. ${ }^{5}$

[^0]At Dura-Europos, modern Salihiyeh, on the Euphrates River, a series of excavations have been carried out by American, ${ }^{1}$ French, ${ }^{2}$ and Franco-American ${ }^{3}$ expeditions since 1920. In form, decoration, and glaze, the ceramic ware from this site very closely resembles that from Seleucia. Certain types, such as the black-ribbed and the fine, very well made red ware, are not to be found at Seleucia. The Parthian occupation at Dura was lengthy and extensive, and there will doubtless be much additional ceramic material in the final publications.

Preliminary excavations under Leroy Waterman of the University of Michigan were begun in 1927 at Seleucia on the Tigris, the modern Tel Umar, "on behalf of the American School of Oriental Research of Baghdad, with funds supplied by the Toledo Museum of Art." ${ }^{4}$ The next year a five-year program was laid out under the auspices of the University of Michigan, with funds supplied by the Toledo Museum. Work was pushed forward with increasing vigor each year by means of additional staff members and larger forces of native workmen. In 1930 the Cleveland Museum of Art contributed equally with Toledo to the costs of the expedition. Very little Sasanid material was found in the course of the excavations; a greater part of the work for the ensuing five seasons, 1927-32, was carried on in three Parthian levels, and a start was made in a fourth or Hellenistic level.

In 1928 the Deutsche Orient-Gesellschaft began excavations under the direction of Oscar Reuther upon the site of Ctesiphon. Work was resumed in 1931-32 by Ernst Kühnel in coöperation with the Metropolitan Museum of New York and the German organization. Excavations during this latter season were confined entirely to the east bank of the river. This city, which was founded by the Parthians, was directly opposite Seleucia in ancient times and is now divided into two unequal parts by the present course of the Tigris River.

[^1]Here both Parthian and Sasanian material was secured, ${ }^{1}$ although the excavation was not particularly productive of pottery.

In common with many other sites Nineveh seems to have had a long Parthian occupation beginning just after the invasion of Mesopotamia, when an extensive program of rebuilding brought new life to a city almost devoid of occupation. ${ }^{2}$ Some shapes common to Parthian wares were discovered by the excavators under R. Campbell Thompson, but many others seem unique. Red-painted pottery, some pieces painted inside and out but more often with the paint confined to a narrow band just below the rim, was found. Another group which the excavators believe to be Parthian shows definite Aegean influence. On the whole this pottery bears very little relation to the material from Seleucia.

## COLLECTIONS OF PARTHIAN CERAMICS

The largest single collection of Parthian ceramics outside Iraq is to be found in the Museum of the University of Michigan ; it was secured by excavation at Seleucia. The Toledo Museum of Art and the Cleveland Museum of Art also shared in the division of objects allotted to the Expedition by the Iraq authorities. About one half of all the material excavated was retained by the Iraq Museum in Baghdad, but because of lack of space, only a small part of it is on exhibition.

All of the Parthian ceramic ware from Nippur now in the United States is on exhibition at the Museum of the University of Pennsylvania. Besides several slipper coffins, there is a wide variety of bowls, platters, jugs, vases, and jars of many patterns and shapes, some of unusual beauty. Unfortunately, this material cannot be dated with any degree of accuracy, nor can we even be sure that a given piece was among those excavated at Nippur, since some objects were purchased from the Arabs. This pottery will, therefore, be of still greater value if we are able to date and classify it by means of comparative material.

[^2]The British Museum in London possesses a considerable quantity of Parthian ceramics acquired in the course of the last century, especially through the efforts of early excavators in Mesopotamia. Much material collected and described by Loftus, as well as that from the Babylonian expedition of Rassam, is to be found there. Other Parthian pottery on exhibition is from Nineveh, Warka, Babylon, and Samarra.

The Staatliche (Kaiser Friedrich) Museum of Berlin contains Parthian ceramic objects from the German excavations at Asshur and Ctesiphon, although neither site seems to have produced much ceramic material from this period.

The Syrian National Museum, Damascus, has acquired as a result of the excavations at Dura-Europos an excellent collection of representative specimens of Parthian ceramic art, some of which are now on display. The collection in the Louvre has also received material from the same source, a portion of which has been on exhibition. The Yale Art Museum at New Haven, Connecticut, has likewise shared in the division of ceramic material, and their collection should now be second in size and importance in the United States.

The Museum of Antiquities in Istanbul, Turkey, received some of the objects excavated during the nineteenth century in Mesopotamia, since the territory was then under Turkish control. Some of them are now on display.

Smaller collections or isolated examples of Parthian ceramic art in the United States may be found in the Field Museum of Chicago (where there are objects from the neighborhood of Kish), the Art Institute of Chicago, ${ }^{1}$ the Semitic Museum, Harvard University, and the Metropolitan Museum of Art, New York City.
${ }^{1}$ N. C. Debevoise, "The Pottery of the Parthians," The Bulletin of the Art Institute of Chicago, XXIV (1930), 77-78.

## II. THE EXCAVATIONS AT SELEUCIA (TEL UMAR) ON THE TIGRIS

## TOPOGRAPHY

About twenty-five miles by air line south of the city of Baghdad there lies a large complex of mounds which once formed the great city of Seleucia on the Tigris. ${ }^{1}$ At the present time they are uninhabited, and, with the exception of a few jackals and two or three varieties of camel thorn, there is little life of any sort. Around the margin of the mounds cultivation is carried on by means of water brought from the Euphrates River by the modern Yusufiyah canal, and grains of various sorts as well as melons are grown.

Today the Tigris River lies about two miles east of the Tel Umar complex, but this course is a relatively recent one ; in antiquity the river passed about a mile and a half nearer the mounds than at present. This change has been the source of much difficulty in identifying the sites of the ancient cities of Seleucia and Ctesiphon. From classical sources ${ }^{2}$ we have long known that these cities were located on opposite banks of the river, but recent excavation has shown that the present course of the Tigris runs through the eastern part of Ctesiphon, leaving only a small portion of the ruins of that city upon the east bank. ${ }^{3}$ The ancient bed is plainly visible as a low flat plain, devoid of ruined mounds, which stretches from the base of the zigurrat at the eastern edge of the Seleucia complex and extends to the "Sur," the small remainder of the once mighty walls of Ctesiphon.

The seasons $1927-29^{4}$ were occupied largely with exploratory
${ }^{1}$ M. Streck, "Seleucia und Ktesiphon," Der Alte Orient, XVI (1917), Hefte 3-4; E. R. Bevan, The House of Seleucus, I, 253-255; J. H. Schneiderwirth, Seleucia am Tigris; E. A. Fabian, De Seleucia Babylonia; L. Waterman, Preliminary Report, Second Preliminary Report.
${ }^{2}$ Pliny, Hist. Nat., vi, 30-3r.
${ }^{3}$ See sketch maps and photographs in L. Waterman, Preliminary Report, p. 3, and Introduction, pp. i-8; Oscar Reuther, "The German Excavations at Ctesiphon," Antiquity, III (1929), 438-439, map 435.
${ }^{4}$ N. Manasseh, "Architectural Notes, Seasons 1927-29," Preliminary Report, pp. $9^{-17}$
work, in the course of which a Parthian villa and a wine and molasses factory were uncovered. An airplane photograph made through the courtesy of the Royal Air Force, led to a decision to concentrate efforts upon the most promising of the blocks so clearly visible on the mosaic map of the complex. The block thus selected, designated "B," seems to have been occupied by one large building, often called a palace. ${ }^{1}$ There does not seem, however, to be any evidence that the structure belonged to the nobility, although the owners surely must have been prominent and wealthy to have maintained such an establishment. Certain small rooms near the corners, which have no access to the interior, appear to have been used as shops.

The first level of this block was fairly well laid bare in the course of the season of 1929-30. ${ }^{2}$ An open courtyard in the western central part of the building was excavated to water level, about 40 feet below the surface of the mounds. During the season 1930-3I work was continued, and when operations ceased on January 20 all Level II had been removed and Level III had been partly exposed. During 1931-32 the remainder of Level III was excavated, and some parts of Level IV were cleared.

## CHRONOLOGICAL EVIDENCE FOR THE DATING OF THE POTTERY

The problem of dating excavated material is one which confronts every archaeologist. Objects upon which a chronological system may be based must occur with considerable frequency, must be made of a durable substance, must be subject to frequent change in design, must be more or less transitory in character, so that they may not be handed down from generation to generation, and, finally, they must be datable by some method or other.

Instead of clay tablets or inscriptions, few of which have been found as yet at Seleucia, our chief reliance in matters of chronology must be placed on the coinage. Coins often bear dates or may be dated by one of the catalogs which have appeared in almost every field. They have one serious disadvantage, in common with other small objects of durable nature, such as seals and engraved gems; they may work down to earlier levels below their proper one, or because of their intrinsic value they may be passed on for a number of generations after the time when they were made. For this reason little

[^3]reliance can be placed on the evidence of a single coin except in unusual circumstances.

Next to numismatics, the products of the potter's wheel provide us with one of the best chronological scales. Owing to the very nature of the material, pottery seldom remains intact over a period of years; sooner or later, cracked or broken, the discarded pot finds its way to the dump. Clay is a material which can carry on a tradition or discard it with equal ease, since it expresses the transient feelings and thoughts of the potter. The passing of centuries or the advent of some new influence appears in the record of the pots. Unfortunately, pottery seldom bears a date, and we must depend on catalogs of comparative material, none of which exist in the field of Parthian ceramics.

At Seleucia, from the evidence presented by pottery, surface coins, and trial trenches, it appears that the occupation of the mounds shifted from one quarter to another in different periods, and, like Baghdad of today, the ancient city never fully occupied the entire complex of mounds during any one period. The earliest Greek material has been found in the western part of the mounds, whereas most of the Sasanid objects have come from the southeastern section. A few badly weathered and fragmentary constructions remained upon the surface to suggest that even the block under excavation may have been occupied later than Parthian Level I.

In order to secure a satisfactory system of chronology for dating the pottery found in the various levels we must turn to the numismatic evidence for aid. There seem to have been two occupations of Level I, to judge from architectural evidence, but the coins must furnish us with more exact dates. ${ }^{1}$ Important occupation of this part of Seleucia seems to have ceased about the year 198/99 A.D., after the sacking of the city by Septimius Severus. ${ }^{2}$ This event is represented by a hoard of 58 tetradrachms of Volagases IV (191-208), a part of a cache of i 10 coins. In the case of coin hoards, only the latest coin is of aid in determining the date at which the coins were hidden. Numismatic and architectural evidence leads us, then, to the conclusion that the second occupation of Level I ended about 200 A.D. The end of the first and the beginning of the second occupation of Level I was caused

[^4]by the sack of the city after its capture by Avidius Cassius in i65 A.D. ${ }^{1}$ This event is marked by two hoards of coins, one of 18 tetradrachms, the latest date of which is $165 / \mathrm{I} 66$ A.D. ; the other, of 214 tetradrachms, with the latest date again $165 /$ 166 A.D. The date of the beginning of the first level is uncertain, but it probably commenced with the rebuilding of the city after it had been burnt by the generals of Trajan in II6 A.D. ${ }^{2}$ Certainly there is nothing in the numismatic evidence which disagrees with this conclusion.

The end of the second level came with the destruction of the city by Trajan's generals in ir6 A.D. With regard to the beginning of Level II we can be more definite. Toward the close of the reign of Artabanus III (IO-40 A.D.) Seleucia revolted, ${ }^{3}$ and it was only at the end of seven years that it was again conquered, about 43 A.D. ${ }^{4}$ The failure of this revolt marks a distinct change at Seleucia. The civic bronze coinage ceases, and the Parthian bronze comes into use. There is a sharp break in the character of the architecture and other forms of art, a greater predominance of Oriental and a diminution of Hellenistic influence. Level II, then, began about 43 A.D.

## TABLE OF LEVELS AT SELEUCIA



Roughly speaking, Level III ended about 43 A.D., when the revolt was crushed. For the beginning of this level we have better evidence than that furnished by the coins, in the form of a series of dated bullae, i.e. salt tax receipts and exemptions. ${ }^{5}$ These furnish an uninterrupted sequence from $188 / \mathrm{I} 87$ B.C. in the reign of Antiochus III to
 Demetrius II, whose first reign covered the period I45/I39 B.c. These bullae were canceled and then partly destroyed by a fire, which
${ }^{1}$ Dio. Cass., lxxi, 2 ; Amm. Marcell., xxiii, 6; G. Rawlinson, The Sixth Great Oriental Monarchy, p. 33I, gives 165 A.d. for the end of the war; W. Wroth, Catalogue of the Coins of Parthia, p. lxi, places the peace in 165 A.D. or 166 A.D.
${ }^{2}$ Dio Cass., lxviii, 30 ; S. Yeivin, "Architectural Notes, Season 1929-30," Preliminary Report, p. 18.
${ }^{3}$ Tacitus, Annales, xi, 8-9.
${ }^{4}$ A. von Gutschmidt, Geschichte Irans, pp. 124-I25; W. Wroth, Parthia, p. xlvi.
${ }^{5}$ R. H. McDowell, "Bullae stamped with Greek Legends," Preliminary Report, pp. 26-42.
also wrought great damage to the building itself. We may therefore tentatively assume that Level III began with the Parthian invasion and the capture of Seleucia by Mithradates about I4I в.c.

## TECHNIQUE OF EXCAVATION

This description of the technique employed at Tel Umar in the treatment of ceramic objects is intended not as a model, but merely as a brief statement of the way in which problems encountered were met in the seasons 1930-32. Our present interest begins with the discovery of the object, and we shall trace its path from the " find spot " to the storage shelves.

The majority of objects were reported to a staff member before removal from the ground. Exceptions were made in the case of pot covers and lamps which, owing to their extraordinary numbers, were at once removed and stacked on walls near by. The date, level, find spot, and other pertinent information were written on a piece of paper by the staff member and placed with the object, and at the same time a slip of paper was also given to the workman, with a notation of the amount of baksheesh he was to receive. No reward was given for objects broken by the workmen. This baksheesh was paid not only to prevent leakage of material to neighboring antiquity markets in Baghdad, but also to keep the men in good spirits, for the Arab, who is an inveterate gambler, loves anything in the nature of a lottery.

At noon and night objects were brought in from the field to the registry room, where they were given a preliminary cleaning and, if necessary, mended with celluloid solution. The register was kept, with a carbon copy, on printed loose-leaf forms. Registry numbers were written with waterproof India ink on a portion of the pot previously painted with a narrow strip of white shellac. The shellac prevented the ink from soaking into the pot, furnished a good writing surface, and made it possible to remove the whole number in a moment with a toothbrush and alcohol, although scrubbing with a brush in water or acid left it unaffected.

From the registry room, objects passed to the drafting department. If a pot was of a new type, a scale drawing was made on metric crosssection paper. Measurements of the top, greatest diameter, base, and height, the color of the glaze if there was any, the quality and texture of the body and the workmanship were recorded on the same paper with the drawing. In order to facilitate the rapid location of types, in 1931-32 a small piece of white paper was glued to type vessels
in a prominent position. When the drafting department had completed its work, the vessels were placed on the storage shelves, where all material was grouped according to type. This made study easy, simplified the work of the draftsman who sought to determine whether a particular pot had been typed, and was especially convenient at the time of division with the Iraq government.

## III. TECHNIQUE AND TYPES OF POTTERY

## ANCIENT CERAMIC TECHNIQUE AT SELEUCIA

A satisfactory source of clay is the first requisite for the successful manufacture of pottery. At Seleucia, clay of a suitable nature may be found not far below the surface of the ground. This undoubtedly served, after a little washing, for most of the common ceramic work. Clay for finer grades of ware was probably prepared from this local material by careful washing and levigation. When the clay had dried somewhat, it was doubtless kneaded to a proper consistency, then mixed with sand as a degraissant, and made into lumps for the potter and his wheel.

The date of the introduction of the potter's foot wheel is uncertain, but by the time of the Ptolemies it was in use in Egypt. ${ }^{1}$ Previous to the introduction of the foot wheel the tournette and the weighted or spun wheel were used, and differentiation between wares thrown by a skillful workman using any one of these three means is difficult if not impossible. So far as I am aware, no true potter's wheels have been found in Mesopotamia, doubtless because they were made of wood, and no evidence of either wheel or tournette was discovered at Seleucia. In all probability most of the ware at Seleucia was made upon the true potter's wheel, in much the same fashion as in modern Baghdad. At the pottery in Kazemain the potter's wheel consists of two circular wheels at opposite ends of a shaft. This is erected vertically, and the bottom wheel when weighted with clay is turned with a kicking motion of the foot, thus rotating the shaft and upper wheel. Upon this the clay is thrown.

A few examples of vessels for storage purposes (184), some pot covers (36-37), tiny cosmetic dishes (317), and certain irregular shapes (350-351), impossible to create on the potter's wheel, were made by hand. Some of these may have been originally formed on the wheel and then decorated by hand, or made in a clay or plaster mold (79, Fig. r). Some jars were a combination of wheel- and hand-made

[^5]sections (80). Obviously a number were made in sections upon the wheel and then stuck together with a thin slip (pilgrim flasks 298-306).

When the completed pot was removed from the wheel with the aid of a piece of string, it was set aside to dry before firing. If a very thin ware, such as 166 and 168 , was to be produced, the walls of the vessel were pared to the correct thickness with a knife after the drying had progressed sufficiently. If the finest quality of work was desired, the vessel was then put upon the wheel and the marks of the cutting


Fig. I. A half of a molded jar and a complete one, no. 79
were smoothed away. Possibly some method of turning the vessels down upon the wheel or in a sort of lathe was in use, for certain of the pieces of thin ware show no signs whatever of knife marks, although they are too thin to have been thrown directly on the wheel. Handles were stuck on after drying had progressed to the proper point, or if the vessel was too delicate to allow rough treatment, they could be attached with a thin slip (Fig. 2 and Pls. II-III).

The kilns were probably fired with bundles of camel thorn in the same manner as the modern Mesopotamian brick kiln. Pottery was
piled up in the kilns, one piece above another, as the spur marks on the top and bottom of many pieces prove (Pl. V, Fig. I). Some of the finer pieces were supported only from the bottom. The design of these spurs seems to have changed but slightly over a long period, for the three-prong spurs similar to those found at Seleucia are still in use today. Sometimes chunks of clay were rapidly molded with the fingers into oblongs, triangles, and other suitable shapes to keep the vessels erect and hold them away


Fig. 2. Detail of double rope handle from the sides of the kilns and from one another. ${ }^{1}$

One kiln was found in the southeastern part of the building ${ }^{2}$ not far from the small shops ranged along the outside wall and opening into the street. The structure itself was shaped like an elongated horseshoe, with clay side walls about one meter high. The last firing had been completed, and the spurs and lumps of clay which separated the vessels were piled in one corner of the room. The kiln had been cleaned out, perhaps in preparation for the glazing of the pilgrim flasks baked in the last firing, and placed at one side.

Greater care in manufacture and a decided improvement in technique are apparent in Level III and still more in the few examples from Level IV, which is Hellenistic. This earlier material has been included for purposes of comparison and to show the continuity of development on the site. In Level IV, after the bodies of vessels had been shaped, a large number of them were replaced upon the wheel and the bases were reworked, so that the lower parts of the vessels have a more pleasing shape and stand more evenly. The glazing also covers the vessels more nearly equally and seldom shows the large runs common in the upper levels.

[^6]TYPES OF POTTERY AND THEIR USES
The brief span of 360 years under consideration in this volume is scarcely long enough to display marked changes in pottery forms from level to level. Seleucia reached the peak of its latter-day prosperity under the Hellenistic Greeks, and its economic wealth is reflected in the careful workmanship of the Level IV pottery, the excellent glaze, and the reworking of the bases of the pots. With the growth in political and economic importance of the Parthian city of Ctesiphon across the river, Seleucia probably suffered a slow decline, a fact reflected in the increasing carelessness in manufacture and glazing, and even in a decreased amount of pottery in use. The whole series from Hellenistic days to the end of the Parthian Empire, at least in the area excavated, apparently suffered a slow decline rather than any abrupt change, in spite of the Parthian invasion. This is wholly consistent with our knowledge of the Parthians, who preferred to allow commerce to proceed uninterrupted on its way and to collect revenue from it rather than disturb its course to the detriment of their taxes.

Changes in shape may easily be observed in the cooking pots, of which 347 is the type in Levels I-II and 346 in Levels II-III. Another example of change is furnished by storage jars, such as 95 and 96 , which are common in Levels I-II, and 98 which is the typical jar of Level III. Careful examination of the catalog will reveal other less obvious examples.

Little pottery of the immediate Oriental predecessors of the Parthians in Mesopotamia and even less of the Hellenistic material from the same territory has been published ; consequently there is scanty basis for an attempt to determine what were the predominent influences in the pottery from Seleucia. Comparison with Hellenistic pottery from Palestine will show some obvious relations, but such material comes from a land separated from Mesopotamia by five hundred miles of desert and with different traditions, and it is therefore not of great value for purposes of comparison. Unfortunately the Hellenistic levels at Seleucia have not yet been completely excavated, and thus our best source of comparative material has not been made available.

The greater part of the pottery from Seleucia was discovered where the inhabitants left it when they fled from some invasion, under the ruins of a fallen wall, or in the rubbish heaps, discarded and broken. Only a small percentage of the total of the 234 graves opened contained pottery. Most inhabitants of block "B," the area chiefly under con-
sideration, were not provided at burial with food offerings or drinking vessels. The more wealthy, on the contrary, presumably the masters or persons of importance, were usually so equipped, especially when they were buried in one of the large family vaults. The custom was also affected by the apparent economic decline of the city, for pottery in the graves is progressively more frequent from the first level downward. ${ }^{1}$ One of the commonest types of pottery in the graves includes the lachrymatory bottles of a fine buff clay covered with a red wash and burnished vertically (73), or the less elaborate unburnished ones, tall and slender and of a very fine clay (74). In the large underground burial vaults containing a number of cubicles small lamps (357,36I, 4I2) were placed in a small niche at the back of the tomb or possibly nearer the bodies on the top of the separating partitions. Some of these were undoubtedly dropped by grave robbers, who invariably came to despoil the dead. One large vault (II, 159 ), less thoroughly ransacked than the others, contained several remarkably fine pieces of pottery. A large two-handled jug of very fine cream-colored clay pared to a thickness which varied from 1.5 to 3.0 mm . ( 172 , Fig. 3), a very well made cosmetic dish covered with a blue-green glaze (325), two pot covers (type of 20), and four lamps (type of 357 ) had been left in the tomb. A small cosmetic pot (54) of reddish clay, covered with a red wash and burnished, was found in grave 23I, III, Room 216 .

Customs seem to have varied in other cities, for Loftus usually found "close to the foot of each coffin . . . one or more large glazed water-jugs and earthen drinking cups, of extremely artistic form." ${ }^{2}$ At Nippur the excavators found Seleucid, Parthian, and Sasanian coffins furnished with ornaments, but not with implements or utensils. ${ }^{3}$

Although the majority of burials were inclosed in brick structures, a considerable number of bodies were placed at full length in baked clay coffins. The sides of these coffins were parallel, the ends rounded, and the top, which was open the full length, was occasionally covered with a clay lid, but more often simply protected by a brick superstructure. A number of these coffins were covered with a brilliant blue-green glaze. With the exception of one surface example no slipper coffins were found in Level I or II, and not until Level III was reached were occasional
${ }^{1}$ All these matters will be covered more fully by Mr. S. Yeivin in his final report of the grave material. The writer was able to correct and verify his own impressions from Mr. Yeivin's manuscript, which he was good enough to make available for this purpose. See also S. Yeivin, Second Preliminary Report, pp. 33-64.
${ }^{2}$ W. K. Loftus, Travels and Researches in Chaldaea and Susiana, p. 213.
${ }^{3}$ J. P. Peters, Nippur, II, 228.
specimens discovered. This evidence reopens the question of the date of the slipper coffins ${ }^{1}$ and would seem to indicate that they may be earlier than we have hitherto supposed. The difficulty of firing and then glazing an object six feet in length is ample testimony to the skill of the potters of Seleucia.

Infants and small children were often buried in cracked and discarded vessels such as cooking pots (347), large round unglazed jars (i83), or


Fig. 3. An example of the "eggshell" ware. No. 172
the more elongated forms (185) ; and even adults were sometimes buried in this way. The long torpedo-shaped storage jars ( 95,96 , 98,99 ) were sometimes split in half, one part being used for a coffin and the other for a cover.

The purpose for which a vessel was intended can be ascertained in only a few cases ; the cooking pots, blackened by the smoke of many
${ }^{1}$ S. Birch, History of Ancient Pottery, p. 106, believed them to be Sasanian, as did J. P. Peters, Nippur, II, 228, and H. R. Hall in the section on Mesopotamia in How to Observe in Archaeology, p. 106.
fires ( $346-348$ ), the lamps, and the pilgrim flasks are some unquestionable examples. Certain tiny pots are so small that they can have served only as containers for some valuable ointment, kohl, or other toilet preparation (38-62). Possibly some of them, tiny models of larger vessels in actual use, were made as toys for children (307-315). Small unglazed pots with projecting side spouts $(75,76,176,177)$ were certainly used for drinking, like their modern counterparts in Syria today. Curiously enough, the form is no longer found in Mesopotamia. The china pig of our childhood was foreshadowed by examples of unglazed banks (338-34I), and, like the china pig, their slots were often damaged when coins were surreptitiously removed. Stands for jars took simple and old forms, such as the circular rope of clay $(334,336)$ and the hollow collar (33I). Some of the unglazed jars (77, 78, 81, 84) have single small holes bored in their sides. Possibly these were measures which when filled with liquid allowed the excess to run off through the small hole and permitted the measured remainder to be poured from the other side.

Pot covers took a variety of forms, only a few of which can be recognized, since then as today a small plate or saucer turned over a vessel served alternately as cover and drinking cup. Some special forms are discernible $(27-30,35)$ which have a hole in the center of the bottom, doubtless for a string which could be used as a handle. Others have a special handle on the back ( $31,32,36,37$ ) or a rim definitely designed for holding the cover on the pot, which makes their purpose certain (20). We can infer the use of many others (23-26) only from the frequency of their occurrence and the circumstances of their discovery. Probably other similar forms served interchangeably as dish and pot cover.

Quantities of storage jars ( $95,96,98$ ) were found in every level, although they underwent some alteration in form through the different periods. Many were lined with bitumen to make them impervious containers for oil or wine. But the usefulness of such vessels did not cease when they had become cracked and were discarded as no longer suitable for liquids. In the center of every courtyard there was a brick with a round hole in the middle through which ran the waste water and sometimes, apparently, the sewage. Below this brick cracked storage jars were placed, sometimes with additional holes knocked in their sides, so that the waste water might percolate slowly into the soil. ${ }^{1}$
${ }^{1}$ N. Manasseh, "Architectural Notes, 1927-29," Preliminary Report, pp. 9-11, and Fig. 3.

In large courtyards an old "hib" (no proper translation of this Arabic word is possible since we have no similar vessel ; see 94, 97, $35^{2}$ ) might be placed directly below the hole in the brick, and below the hib a group of old storage jars, as an additional aid to subsoil drainage (Fig. 7, p. 60). In one street was disclosed a row of storage jars, turned bottom side up, but no solution of the question of their use was found.

When new the hibs were used to cool water in ancient Parthia, even as today the Arab cools and settles the liquid mud from the great river. As containers of water, wine, or other liquids the glazed "pilgrim flask" (Fig. 4) might be slung over the shoulder for use on a journey (298-306). Occasionally the handles were offset (301), so that the flask might more easily hang by one's side. At Seleucia this ancient form, which varied little from prehistoric to comparatively modern times, was ordinarily glazed, for the few exceptions were obviously in an unfinished state (see p. I4).

Certain large flat, coarse clay vessels ( $\mathrm{I} 3,344$ ) were probably used


Fig. 4. Pilgrim flasks: back, no. 304; front, no. 315 as containers for burning charcoal ; similar vessels are now employed by the Arabs for warming the house, boiling coffee, and keeping water warm.

Several odd shapes intrigue the imagination, but offer little evidence as to their real use. In room III, 16 sub, Level IV, near the remains of a chest which contained a series of salt-tax ${ }^{1}$ bullae, was found the vessel shown in the accompanying illustration (343, Fig. 5). The photograph was taken with the aid of a mirror in order to show both the side and the base. There are only two openings into the vessel, one a very small hole in the short spout on the side and a larger hole in the center of the base. The top of the vessel is capped with a knob resembling that of a teapot, and there is a small handle on one side. The pot is very well made and well glazed. One suggestion was offered that it was used to

[^7]smoke some such drug as hasheesh, but since there are no signs of smoke around the base such a use appears questionable. A second suggestion, made by Mr. S. Yeivin, is that the vessel may have been used to warm wine. The liquor might have been poured in through the hole in the base and the whole pot might then have been placed over a brazier or jar containing boiling water; the warm air or rising steam


Fig. 5. Unique vessel found near bitumen bullae. No. 343 would have kept the wine in the vessel warm. Still a third suggestion is that it was used to soften bullae to receive seal impressions. To secure this result, the open base would have been placed over another pot containing boiling water; steam would then pass up inside the collar and down and out the spout with considerable force. A lump of bitumen could be held in front of this jet without the danger of hot water spurting forth with the steam, for all the condensation would be collected in the trap formed by the interior collar, and the resultant water might be removed at leisure.

Two curious cylindrical objects of unglazed baked clay ( 350,35 I) also offer no definite suggestion of their original use. In both the handles have been broken off, and both were apparently discarded on this account, for they are otherwise intact. Their construction indicates that they were used horizontally, and one possible explanation is that they were employed as heaters or foot warmers. Burning charcoal would be placed inside, and the whole contrivance could be carried about by the handle. The small trough and wall in the front would effectually prevent ashes from falling out upon the rugs and other floor coverings. The small sliding door of 35 I would have been utilized to control the flow of air and hence the rate of combustion, and may also have served to prevent ashes from blowing out of the vessel. Another equally plausible suggestion made by Mr. Yeivin is that these long clay cylinders served as lanterns. A lighted lamp could have been placed within at a sufficient distance from the orifice to shield it from
the wind, and the whole could have been carried by the handle. The sliding door of 35 I , if this suggestion is correct, would serve on occasion to shut out the light, thus making of the vessel a sort of dark lantern.

Hollow pottery rings with three openings long puzzled the excavators. Later a more nearly complete example and enough fragments were found to make an accurate restoration possible ${ }^{1}$ (Pl. B, Fig. 3). Liquid, probably water, was poured into the funnel, whence it ran through the hollow ring and spouted out of the mouths of the fishes or turtles into the small dish. From this dish, which had no connection with the water supply from the hollow ring, the water must have overflowed to the ground. Whether or not both animals were of the same kind, i.e. two turtles or two fishes, or were as represented in the restoration, cannot be determined, since no example was discovered with both still remaining on the ring.


Fig. 6. Askos. No. 335

The use of this object is unknown. There is no reason to suppose a religious usage, for the object might have been a simple toy for children or a device for the amusement of their elders.

One of the definitely foreign forms is the small Greek askos (335; see Pl. IX, Fig. 2 ; sketch, Fig. 6). The vessel, composed of clay which might be local, was molded longitudinally in two parts; although only two examples were found, the askos is probably of local manufacture. Other shapes which betray Hellenistic influence are the graceful one-handled jugs, i63 and i64.

Besides the small burnished lachrymatories (see p. i6), of which some eight or ten were found together with fragments of as many more,

[^8]a large single-handled jug of similar ware was discovered (345). The clay is reddish and is covered with a red wash which was burnished vertically. This ware is not similar to the fine ware found at DuraEuropos. One other vessel of a like ware was recovered, a small cosmetic pot (54). In view of the small number of sherds found, this may possibly be an imported ware. The more central and eastern regions of the Parthian Empire at once suggest themselves as a source, since they have yielded pottery of a somewhat similar nature. ${ }^{1}$

Other foreign wares were few. The most common was the "Roman Arretine" ware, a considerable number of fragments of which were discovered. Most of the sherds were not over three to six centimeters in size, and shapes could not be identified. Occasionally pieces of what appeared to be large flat dishes were found, and one discovered early in the excavation could be reconstructed (349). The ware was almost always very fine and well made and was certainly an imported product of the first quality. A few fragments of the so-called Greek black "varnish" ware were found, usually the base of some vessel. One tiny piece of Hellenistic painted ware was discovered, but it was too small to be of any value so far as identification of type was concerned. Most of these sherds, except the Arretine ware, were probably turned up by the Parthians when their deep foundations cut through the Hellenistic levels and were picked up by the children or their elders as curiosities.

Jar stamps, which were made of clay with designs cut upon them, usually after firing, were sometimes employed to stamp decorations, not running patterns, upon leather-hard pots, but neither they nor potter's marks were in common use at Seleucia during the Parthian period. Such stamps do not seem to have been introduced until late Sasanian or early Arabic times, and few are found on the surface of the complex of the mounds. The Greek inscriptions stamped upon the handles of the jars do not fall within the province of this work, and will be dealt with elsewhere.

During the Parthian period at Seleucia choice pottery was mended with fine gypsum plaster in the same manner as were the clay and bone figurines. ${ }^{2}$

[^9]The scanty decoration on the pottery gives us little information by which connections may be traced or identifications made. One of the most common forms is a simple band or two of chevron pattern around the shoulder of the vessel (Pl. A, Figs. 2-3; Pl. B, Figs. 1-2). ${ }^{1}$ Such patterns are often scarcely distinguishable under a heavy coat of glaze (see Pl. III, Figs. 1-2). On a type of vessel very common at Nippur, but rare at Seleucia, vertical lines have been added to form a pattern around the body of the pot (Pl. A, Fig. 2; Pl. III, Figs. 1-2 ; this was obviously intended for glazing, which for some reason was never applied; see also Pl. A, Fig. 3, which is a variant of this design). Such designs were cut into the leather-hard pot with some pointed instrument. Simplest of all decoration were slashes in the rim or shoulder of a vessel (Pl. A, Fig. 4; 318).

Some of the smaller storage jars of a round type ( 183 ; Pl. A, Figs. 5-6) have been decorated with simple rows of dots by means of a comb or comblike tool. ${ }^{2}$ Another pattern (Pl. A, Fig. 7) is a wavy line made with a sharp point, accented by dots below. Still another design, barely visible through a heavy glaze, consists of groups of three parallel lines, vertical in the upper and lower registers and forming a chevron pattern in the middle (Pl. A, Fig. r).

## LAMPS ${ }^{3}$

Most numerous of all the ceramic objects at Seleucia, the lamps are one of the very characteristic Parthian forms. Scattered through every room in the great house and in the vaulted tombs, they remain mute testimony to the smoky and odoriferous condition of the ancient dwelling. The typical shape is small, with a circular reservoir and a long projecting nozzle (388-39I ; the four commonest types of small glazed lamps). Down this nozzle was pushed a wick; in some lamps the wick still remained, blackened and charred. Doubtless sesame oil was usually burned, for imported olive oil would be too expensive.

[^10]

TYPES OF DECORATION

PLATE B


Figs. 1-2. TYPES OF DECORATION


Fig. 3. RECONSTRUCTION OF FOUNTAIN
(Scale about 1:2)

By far the majority of lamps are glazed both inside and out with a gray-green glaze which rendered the clay impervious to the oil. The ends of many nozzles are tipped with a darker blue-green (399), which apparently was especially resistant to the heat of the burning wick. Only a few of the glazed lamps were decorated (407, 409, 410), probably because little of the decoration would remain visible through a heavy coating of glaze. One very interesting example is a combination of the more elaborate dish type and ordinary variety (417, Pl. XII, Fig. r). This lamp is furnished with a nozzle and a flat handle, and the whole is mounted on an elaborate base. The decoration consists of small round disks or bosses placed on the nozzle and handle and allowed to project from the side. Such ornamentation is found on late examples of graceful jugs, which, although they betray some influence from the Greek amphora, are nevertheless discovered on Parthian sites in Parthian levels. ${ }^{1}$ Another lamp, with a tall neck and a well-defined handle, seems more Neo-Babylonian than Parthian in form (406).

Many of the common shapes are found both glazed and unglazed, although numbers of the latter kind may have been destined for a glaze which was never applied, as in the case of the pilgrim flasks found near the kiln. One type common in Levels II and III (355) has an irregular base and a nozzle which extends downward at a considerable angle with the opening below the base of the reservoir. If a wick was compressed tightly in the opening, such a downward slope may have aided in the flow of oil, but the problem remains of how such a lamp might be placed upon a flat surface. Possibly when the reservoir was full of oil, the lamp might be balanced on the edge of a mud shelf, the rounding edge of which would fit the curve of the lamp base. Another lamp (359) has a straight barlike projection at right angles across the base. This would prevent contact between the hot and possibly greasy lamp and the surface upon which it rested, a feature which would be especially desirable if the lamp stood on some delicate fabric.

[^11]Some of the lamps have projections within the nozzles designed to prevent the wick from being forced too far down, as in 359 , or to prevent it from moving too freely, as in 395 and 396. In other examples these projections seem mere remains of the joint between the wheel-made reservoir and the hand-made nozzle.

Most of the elaborately decorated lamps are unglazed, as 38 I and 387, probably because, as previously mentioned, a thick glaze would hide most of the design. Lamps with seven burners and of elaborate design (382) were not common, and none were found in the upper levels, although seven-burner lamps of different design were used in Sasanian times.

Roman lamps, such as 368 and 369 , were found in Palestine from about the same period, and Hellenistic lamps, such as 376 and 377, somewhat similar in shape and design, were also discovered there, but relations of both form and technique are too uncertain to warrant any theory of importation. Such a view is not necessary in the light of the large foreign population of Seleucia, and considering the similarity of clay and workmanship to the other non-Hellenistic shapes, local manufacture seems probable. A single exception may be found in 387 .

The reservoir of the common types of nozzled lamps was made upon the wheel, and the nozzle was stuck on by hand. The hole punched in the wheel-made body to effect a juncture with the handmade nozzle has often left a very perceptible ridge at the point of union. In a similar manner were made such special forms as 368 and 369 , and the saucer lamps, 408 and 412 . All the decorated forms were molded longitudinally, that is, the base was one piece and the upper portion was another. Whether or not the heavy, crude, open-trough lamp (385) is a form used again from some earlier time, or some special shape made for a particular purpose, cannot be determined. Only one such example was found.

## IV. GLAZE AND GLAZE ANALYSES

Early excavators in Mesopotamia who sought to determine the antiquity of a site were almost unanimous in their verdict that a site with glazed potsherds was too late to be of interest, and they eventually settled on the Parthian period as the one in which glaze came to be extensively used. Subsequent excavations have shown the fallacy of such a view. In Egypt, by 3400 b.c., glazing had already undergone extensive development. Glazed tiles a foot long, covered with an all-over hard blue-green, were used for lining rooms, and excellent two-color work could be produced without streaking. ${ }^{1}$ Ву i580 в.c. a complicated technique had developed, and a number of alkaline glazes were used. Colors such as blue, green, purple-blue, violet, a brilliant apple-green, chrome-yellow, lemon-yellow, crimson-red, brown-red, and milk-white were available.

Outside Egypt the earliest glaze thus far discovered has been found at Mohenjo-Daro in India. At that site an excellent alkaline glaze was utilized by the peoples of the earliest levels that have been cleared (c. 2500 or 2700 b.c.). Since the technique was very highly developed, this glaze must have been introduced still earlier. Vessels were decorated with glazes of different colors applied in simple patterns. Both copper and manganese as coloring agents were known. ${ }^{2}$

In Assyria colored glaze was used on small objects in the third millennium в.с. About iпоо в.с., with the discovery of tin glaze, tile was prepared for use in building. A considerable number of colors were employed, and the Assyrians were able to place these very close together without risk of streaking. Elaborate and delicate multicolored scenes full of action were depicted. ${ }^{3}$ At Eridu (Abu Shahrain) glass is reported as early as 2300 b.c. ; if the report is correct, glaze may have been employed before that date. ${ }^{4}$ A light blue-green glaze, probably alkaline in character, was found at Nuzi, modern Tarkalan,
${ }^{1}$ W. M. Flinders Petrie, Arts and Crafts of Ancient Egypt, pp. 107-ir8. Petrie dates this work to the first dynasty, which he places in 5500 . I have followed Breasted's chronology.
${ }^{2}$ Sir John Marshall, ed., Mohenjo-Daro and the Indus Civilization, II, 513-514, 570-582.
${ }^{3}$ W. Andrae, Coloured Ceramics from Ashur, pp. 7 ff.
${ }^{4}$ H. R. Hall, The Civilization of Greece in the Bronze Age, p. 7 I .
which may be dated with accuracy to about 1500 B.c. ${ }^{1}$ Blue-green glaze of excellent quality was in common use at Seleucia in Level IV, which is purely Hellenistic. The Parthian glazes were merely continuations of this art. ${ }^{2}$ More evidence is not necessary to demonstrate that glazes were in common use long before the Parthians.

Until our knowledge of ancient glazes becomes much more extensive than it is at present, no attempt can be made to determine the composition of a glaze by its appearance. Alkaline silicate glazes were made during the Parthian period which, even after exposure in the soil, look sufficiently like plumbiferous glazes to deceive the most expert ceramic worker. Stanniferous glazes sometimes weather in exactly the same manner as do alkaline glazes. Analyses must be the only certain criteria of composition ; most guesses from appearance only serve to make the ground more uncertain for future workers. ${ }^{3}$

Silica is usually the chief element in glazes, the amount varying from 25 to 75 per cent, the higher percentages forcing the potter to employ greater temperatures in firing. In addition to alkaline silicates, borates and earthy or metalic oxides may be used. To combinations of these, certain oxides are added for coloring the glaze. To classify glazes from the standpoint of their action on coloring oxides, they may be divided into plumbiferous, boracic, and alkaline, according to the predominance of one or other of these substances. ${ }^{4}$

Silicates may have been obtained from a number of different sources at Seleucia. The fine sand which occurs below the mounds about water level is mixed with a large amount of clay and would require much purification. Pockets of sand may be found in a relatively pure state. Flint could have been obtained in large quantities from the desert, calcined in a small furnace and then reduced to a powder, or some source of quartz may have been available which when treated in a similar manner would yield a suitable silicate. A small deposit of any one of these materials would have provided sufficient silicate to meet the requirements for glazing. Undoubtedly borates were

[^12]obtainable from the desert soil ; certainly the extensive beds of salts around Shitata and Lake Abu Dibis to the southwest of Kerbala must contain borax among other substances. Oxides of the various metals could be prepared in local furnaces, for lead as well as copper seems to have been fairly common, although all such metals had to be imported from distant sources, probably Persia.

When the proper materials have been reduced to a powder and compounded, several methods of applying them to the pottery are available. They may be sprinkled, blown, painted, or poured on the pot, or the dry pot itself may be dipped into the suspended solution, the porous body absorbing some of the moisture from the colloidal suspension of glaze, causing the glaze to remain on the pottery, which is then ready for a second firing. Many of the pots from Seleucia seem to have been treated in the manner last described, for the portion which the hand would naturally grasp, the base, is often left unglazed. Few examples of two-color glazing occur ; of them the lamps are the most important. Many of the nozzles of the better lamps have been dipped in a peculiarly hard blue-green alkaline silicate glaze, whereas the body is covered with a less durable type of glaze. One sherd was found early in Level II, a part of a shallow dish with a vertical rim around which an edging of blue green had been run in contrast to the "celadon green" of the body. This was probably accomplished by dipping the finger in the glaze and applying it to the edge of the dish, which was rotated on a wheel. Pottery was sometimes dipped a second time and fired again, as drops of glaze on both top and bottom prove. ${ }^{1}$ At the time of their discovery, pots occasionally display all the brilliance and color of their pristine state, but rapidly fade to a dull and irregular color. This is probably due to moisture in the body and glaze which fills the interstices between the layers of decomposed glaze. When this water evaporates and its place is taken by air, the glaze loses its color and assumes a decomposed appearance. Dipping the vessel in water will temporarily restore the original color and luster.

Contrary to expectations, lead or plumbiferous glaze does not seem to have been present in Parthian pottery from Seleucia. Most of the glazes analyzed were alkaline silicates, with an oxide added for color. The following results were obtained from examination of representative specimens from the sherd collection brought back by the writer. Samples were secured by scraping the glaze down to the body, a method which in most cases resulted in almost pure specimens of glaze.

[^13]
## QUALITATIVE ANALYSES OF GLAZE

I. Qualitative analysis : ${ }^{1} \mathrm{SiO}_{2}, \mathrm{Fe}, \mathrm{Sb}, \mathrm{Ni}, \mathrm{Ca}, \mathrm{Na}$

Description of sherd: Cream body, medium texture, light green glaze, matt finish, under glaze decoration of straight lines and chevron pattern. From the surface, but obviously of late Parthian workmanship.
Remarks : The amount of iron appears to be too large to be accidental.
II. Qualitative analysis : $\mathrm{SiO}_{2}, \mathrm{Al}, \mathrm{Fe}, \mathrm{Na}$ (Incomplete?)

Description of sherd: Cream body, medium texture, glaze now grayish white and finely crazed. Sherd was base and portion of side of vessel. Interior of runs near base a dark green. Sample taken from the grayish white part. Level I.
Remarks: The green color may have been due to the iron or to copper which was present in so small a quantity that it was difficult to detect.
III. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Na}, \mathrm{Al}, \mathrm{Ca}$ (Incomplete)

Description of sherd: Buff body, medium texture, grayish green glaze, decomposed and sandy in character.
Remarks: This is an example of a fairly common type of glaze which does not stand up well under exposure.
IV. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Fe}, \mathrm{Sb}, \mathrm{Na}$ (Incomplete?)

Description of sherd: Buff body, medium texture, glaze reddish brown with greenish interior, somewhat sandy in character. Level IV.
Remarks: The green color on the interior, not much of which was included in the specimen taken for analysis, is difficult to explain. Possibly the vessel was originally covered with a green glaze which proved a failure, and it was then glazed a second time. The reddish brown exterior does not appear to be due to weathering.
V. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{~Pb}, \mathrm{Fe}, \mathrm{Al}$ (Incomplete?)
Description of sherd : Cream body, medium texture, yellow
${ }^{1}$ The elements are arranged in the approximate order of their abundance. These analyses were made by the Chemistry Department of the University of Illinois under the supervision of Professor J. Lindgren.
glaze, and somewhat dull in finish. Pottery pit II, one meter deep.
Remarks: This sherd is not Parthian and may be either Sasanid or Arabic. No glaze of this color was found in the excavations. This is the only lead glaze found among those analyzed, and it is not to be confused with the yellow spots mentioned on page 34 .
VI. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Sn}, \mathrm{Cu}, \mathrm{Fe}, \mathrm{Na}, \mathrm{Sb}, \mathrm{Ca}, \mathrm{Al}$

Description of sherd: Cream body, medium texture, bluegreen glaze weathered, crazed, and badly flaking. This sherd is a fluted handle and portion of the body of a jug similar to 280 . Level I.
Remarks: This is a tin glaze. Compare quantitative analysis C.
VII. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Cu}, \mathrm{Sn}, \mathrm{Na}, \mathrm{Fe}, \mathrm{Ca}$

Description of sherd: Cream body, medium texture, glaze pale green, opaque, and somewhat sandy in appearance. Base of small vessel. Level I.
Remarks: Another example of a tin glaze. Compare quantitative analysis C and qualitative analysis VI.
VIII. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Fe}, \mathrm{Cu}, \mathrm{Na}, \mathrm{Ca}$

Description of sherd: Buff body, medium texture, light green glaze, flaking, matt finish. Spur marks on the inside of sherd. Level III.
IX. Qualitative analysis: $\mathrm{SiO}_{2}, \mathrm{Fe}, \mathrm{Cu}, \mathrm{Al}, \mathrm{Ca}, \mathrm{Sn}, \mathrm{Ni}, \mathrm{Na}, \mathrm{Sb}$

Description of sherd: Buff body, medium texture, exterior dark green glaze, crazed and flaking, interior crazed and gray. Level III.
Remarks: In this analysis it was impossible to prevent a small quantity of the body from being removed with the glaze. The tin in this glaze is probably accidental.
X. Qualitative analysis : $\mathrm{SiO}_{2}, \mathrm{Fe}, \mathrm{Al}, \mathrm{Cu}, \mathrm{Ca}, \mathrm{Na}, \mathrm{Ni}, \mathrm{Sb}$

Description of sherd: Buff body, coarse texture, thick dark green glaze, crazed. End of glazed storage jar. Level undetermined.
Remarks: This glaze appears too dark and bluish for a Parthian glaze. In addition, no jars of this type were
discovered at the excavation. It is, therefore, quite possible that this jar is later than Parthian times.

QUANTITATIVE ANALYSES OF GLAZE


* Organic matter, moisture, etc.
A. Quantitative analysis: See table.

Description of sherd: Cream body, medium texture, glaze dark green and glassy in appearance. Rim and side portion of vessel. Level II.
Remarks: This specimen was typical of the common glaze found at Seleucia, although unusually well preserved. It was identified by the writer and others as a lead glaze, from which it was impossible to differentiate it by inspection. Alkaline silicate glazes do not usually stand exposure to weather so well as this example did, but they may if the proportions of the constituents are exactly right.
B. Quantitative analysis: See table.

Description of sherd: Buff body, medium texture, glaze choco-late-brown with iridescence probably due to decomposition. Level I.
Remarks: Two partly complete examples of this ware were found together with numerous portions of necks and handles. See 353 and Pl. VII, Fig. 2. Every vessel or fragment of this glaze was of similar shape. Possibly some potter in the vicinity had discovered this glaze and was keeping it a trade
secret. The rich color is due to manganese dioxide. Manganese glaze similar to this is common in the Arabic period.
C. Quantitative analysis: See table.

Description of sherd: Cream body, medium texture, glaze opaque white, crazed, with greenish tinge along lines of crazing, but with no signs of color on the interior of the base.
Remarks: This is a true tin glaze and was apparently originally milky white.
All these glazes are low-fired, that is, from $1000^{\circ}$ to $1200^{\circ}$ centigrade, and are known as soft glazes. The two commonest colors at Seleucia were blue and green, with all the intermediate shades made by combinations. These were ordinarily produced by firing the glazes which had been colored with copper oxide in an oxidizing atmosphere. Occasionally, through accident, spots of bright yellow resulted on an otherwise green product. This may have been caused by the presence of antimony as an impurity. It is evident from the analyses that a good green can be produced without a lead glaze and that previous conceptions of green resulting from a predominance of lead, and turquoise blue from the predominance of an alkali are incorrect. ${ }^{1}$ No cobalt has been found at Seleucia.

An occasional example from Seleucia exhibits scaling of the glaze, a defect caused by a difference in expansion between the glaze and the body. Under ordinary circumstances, when the difference in expansion is not sufficient to cause the glaze to separate entirely from the body, a fine network of lines known as "crazing" is produced. This effect, when obtained artificially, as in Chinese wares, is called "crackle."

During the Han period (c. 206 b.c. - 220 A.d.) in China a green glaze very similar in many respects to the Parthian was in common use. The color is alike, the crazing is similar, and the decomposition and general appearance are identical. Suggestions have already been made that this glaze went from the Parthian Empire to China. ${ }^{2}$ Other influences which traveled over the same route may be found in the landscape elements in the decoration of varnished clay vases and in the figures of warriors and hunters, all of which were probably borrowed directly from Parthian art. ${ }^{3}$

[^14]
## V. TABLE SHOWING THE DISTRIBUTION OF POTTERY IN VARIOUS LEVELS SEASONS 1930-32

$\mathrm{U}=$ level undetermined
$A=$ vessels so numerous that complete records of them were not kept

| Type No. | I | II | III | IV | U | Type No. | I | II | III | IV | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I |  |  | I |  |  | 36 | . | . |  | I | . |
| 2 |  | 5 |  | . | $\ldots$ | 37 | I | . | 2 |  | 3 |
| 3 |  |  | 1 | . | . | 38 | . | . | 1 | . | . |
| 4 | 3 |  | I ? | $\ldots$ | $\ldots$ | 39 | $\cdots$ | . | I |  |  |
| 5 |  |  | 1 |  | . | 40 | $\cdots$ | . |  | 1 ? | . |
| 6 |  |  | I | . | . | 41 | $\cdots$ | . | 2 |  | . |
| 7 |  |  | 1 ? | . | - | 42 | 3 | וо | 9 | . | 3 |
| 8 | I | 4 | 17 | 2 |  | 43 | 2 | 13 | 16 | . | 5 |
| 9 | . | 1 | . | . | . | 44 | . | . . | 2 | . |  |
| ı |  | 2 |  |  | . | 45 | $\cdots$ | . | 1 | . |  |
| 11 | 4 | 7 | 3 | . | $\because$ | 46 | . | 5 | 1 | . | 2 |
| 12 |  | I |  | . | . | 47 | . | 3 | 3 | . |  |
| 13 |  | 1 |  | . | $\because$ | 48 | . |  | 1 | $\cdots$ |  |
| 14 |  | I | I | - | . | 49 | . | 1 |  | . |  |
| 15 |  | 1 |  |  |  | 50 | . | . | I | . |  |
| 16 |  | I |  |  | $\cdots$ | 51 | 1 | 9 | 6 |  | 4 |
| 17 |  |  | I |  |  | 52 | I | 10 | 1 |  |  |
| 18 |  |  |  | I | . | 53 | I | 6 | 3 | . |  |
| 19 |  |  | 2 | . | 1 | 54 | . | . | I |  |  |
| 20 | I | 6 | 5 |  | 2 | 55 | . | 1 | . | . |  |
| 21 |  | 1 ? | 5 | $\ldots$ | 1 | 56 | . | 1 | 1 | I |  |
| 22 |  | . | . | $\ldots$ | 2 | 57 | . |  | 1 ? | . |  |
| 23 | I | I | I |  | 1 | 58 | 6 | 8 | 6 |  | 2 |
| 24 |  | I | . | . . | I | 59 | . | I | . |  |  |
| 25 | I | I | . |  | . | 60 | $\ldots$ |  | . | 1 ? |  |
| 26 |  | 3 | 1 | $\cdots$ | 1 | 61 | $\cdots$ |  | 1 |  |  |
| 27 |  |  | I | . |  | 62 | $\cdots$ | 2 ? |  |  |  |
| 28 | I | 1 |  | $\ldots$ | 2 | 63 |  |  | 1 |  |  |
| 29 | I | . | 7 | . | 3 | 64 | . | . | 1 |  |  |
| 30 | 3 | $\because$ |  |  |  | 65 | 5 | II | 3 | I |  |
| 31 | . . | . | 2 | . | $\because$ | 66 |  | 7 | 13 |  | I |
| 32 | . | 1 | $\cdots$ | . | $\therefore$ | 67 | $\cdots$ |  | . . | 2 |  |
| 33 |  |  | 1 | $\cdots$ | . | 68 |  |  | 1 |  |  |
| 34 | $\cdots$ | 1 | . | . | . | 69 | $\cdots$ |  | 4 | I |  |
| 35 | . |  | I | . | . | 70 | I |  |  |  | $\cdots$ |

Table Showing the Distribution of Pottery - Continued

| Type No. | I | II | III | IV | U | Type No. | I | II | III | IV | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | I | . |  | . | . | 118 | . | 1 | . | . |  |
| 72 |  | 1 | . | . | $\ldots$ | 119 | $\cdots$ | 2 | $\cdots$ | . . |  |
| 73 |  | 4 | 2 | $\cdots$ |  | 120 | $\ldots$ |  | I | . | . |
| 74 | 2 ? | 2 | 3 | . . | I | 121 | . |  | I | $\cdots$ | $\cdots$ |
| 75 |  | I | . | . | . | 122 | I | . | $\cdots$ | $\cdots$ | $\cdots$ |
| 76 |  | I | . . | . |  | 123 | . . |  | I | $\cdots$ | $\cdots$ |
| 77 | 1 |  | . | . |  | 124 | . | $\cdots$ | I |  | $\ldots$ |
| 78 |  | 2 | . | 1 | 1 | 125 | . |  |  | I | $\cdots$ |
| 79 |  | 3 | . |  |  | 126 | . |  |  | I | $\cdots$ |
| 80 | . | I | . |  | . | 127 |  | 5 | . | . |  |
| 8 I | I | . | . | . | . | 128 |  | . . | 2 | $\cdots$ |  |
| 82 |  | . | 1 | . |  | 129 |  | . | 2 | $\cdots$ | I |
| 83 | . | . | 1 ? | . | . | 130 | . | $\cdots$ | I |  |  |
| 84 | I | . . |  | . | - | 131 | - | I | , | $\cdots$ | $\cdots$ |
| 85 | I | . | . | . | . | 132 | I | I |  |  | . |
| 86 |  | I |  | $\cdots$ | . | 133 | . . |  | 2 ? |  |  |
| 87 | 1 | .. |  | $\cdots$ |  | 134 | $\ldots$ | 2 | . | . | . |
| 88 |  | . | 1 | . | $\ldots$ | 135 | . | 1 | $\cdots$ | $\ldots$ | . |
| 89 | . | I |  | . | $\ldots$ | 136 |  | I | . | $\ldots$ |  |
| 90 | $\because$ |  | I | . | . | 137 | 5 | I |  |  |  |
| 91 | . |  | I | . | $\ldots$ | 138 | I | . |  |  | $\cdots$ |
| 92 |  | 1 | . | . | . | 139 |  | . . | I | 1 | $\cdots$ |
| 93 | I | . | . | $\cdots$ | . | 140 | 1 | $\cdots$ |  |  |  |
| 94 |  | , |  |  |  | 141 | 2 |  | . | $\cdots$ | $\cdots$ |
| 95 | A | A | $\cdots$ | . | . | 142 | ${ }^{1}$ | , | $\cdots$ |  |  |
| 96 | A | A | . |  |  | 143 | I | 2 |  |  |  |
| 97 | 1 | . |  | $\ldots$ |  | 144 |  | I |  |  |  |
| 98 |  |  | A |  |  | 145 |  | I |  |  |  |
| 99 | I | . | .. |  | A | 146 |  | 2 |  |  |  |
| 100 |  | I |  |  | . | 147 | I |  | $\cdots$ | $\cdots$ |  |
| IOI |  | . |  | $\ldots$ | I | 148 |  |  | I |  |  |
| 102 |  | I |  | $\cdots$ |  | 149 |  | $\cdots$ | I |  | $\cdots$ |
| 103 | 1 |  | . | . |  | 150 |  | I | I |  |  |
| 104 |  | 1 | $\cdots$ | $\ldots$ |  | ${ }^{151}$ | , | 10 | I |  | 3 |
| 105 | , | 1 | . |  |  | ${ }^{1} 52$ | 5 | 2 I | I |  | I |
| 106 | 3 | 6 |  | . |  | ${ }^{1} 53$ | I | . |  |  |  |
| 107 | . . | 2 |  |  |  | ${ }^{1} 54$ | I | . |  |  | 3 |
| 108 | . | I |  | . |  | ${ }^{1} 55$ | I |  |  |  |  |
| 109 |  | 1 | 2 | I | I | ${ }^{1} 56$ | . . |  |  | 1 ? |  |
| 110 |  | 2 | 3 | . | I | ${ }^{1} 57$ | . | 1 |  | . |  |
| 111 |  | 1 |  | $\cdots$ |  | 158 | . | 3 |  | $\cdots$ |  |
| 112 | I |  | . | . |  | ${ }^{1} 59$ | $\cdots$ | 1 ? | 3 | I | 1 |
| 113 |  | 1 |  | - | I | 160 | I |  | . |  |  |
| 114 | $\ldots$ | 2 |  | . |  | 161 | . . |  | I | . |  |
| 115 | . . |  | 1 ? | . |  | 162 | . | 1 | $\cdots$ | $\cdots$ | . |
| 116 | . | I | I | .. | I | 163 | $\ldots$ | . | 3 | $\cdots$ |  |
| 117 | $\cdots$ |  | I | . | . | 164 |  |  | 2 |  |  |

Table Showing the Distribution of Pottery - Continued

| Type No. | I | II | III | IV | U | \|Type No. | I | II | III | IV | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 165 | . | I | $\therefore$ | . | . | 212 | . | 2 | . . | . | - . |
| I66 | . | 3 | . | . | . | 213 | I |  | . | . | . |
| 167 | . | 2 | . | . | . | 214 | . . | . | $2 ?$ | . | . |
| ı68 |  | I | . | . |  | 215 | . | I | I | . . | . |
| 169 | . | I | 2 | . | . | 216 | . . | I |  |  | . |
| 170 |  | I |  |  | . | 217 | . | . | . | I | . |
| 171 | . |  | . | I |  | 218 |  | I | . |  | . |
| 172 | . | I | . | . . | . | 219 | . | . | . | . | I |
| 173 | . | I |  | . |  | 220 | . . | I | . | . |  |
| I74 | I |  |  | . . |  | 22 I | . . |  | 2 | I | . |
| 175 | . | 8 | I | . | I | 222 | . |  | 3 |  | . |
| 176 | . | 2 | . | . . | . . | 223 | . . | I |  | . |  |
| 177 | I | 2 | . | . |  | 224 | . . |  | . | . | I |
| 178 | . | I | . | . | . | 225 | . | . | I | . |  |
| 179 | 3 |  | . | . | . | 226 | 2 | 2 |  | . | . |
| I80 | I ? |  | . | . . | . | 227 |  |  | 4 ? | . . | . |
| I8I | . | I | . | . |  | 228 | 2 | 4 |  | . | $\ldots$ |
| 182 | 5 | 2 | . | . . | . | 229 | . . | I | . | . . | $\ldots$ |
| 183 | I | 9 | . |  |  | 230 | . . |  | I | . | . |
| 184 | I | . | . | . |  | 231 | . | I | . |  | . |
| 185 | . | 2 | . | . . | . | 232 | I |  | . | . . |  |
| I86 |  | I | . | . | . | 233 | . | 2 | . | . | . |
| 187 | . | I | . | . | . | 234 | 2 | 3 | . |  | . |
| 188 | I | 2 | I | 2 | . | 235 | . | I |  | . | . |
| 189 | . | 10 |  |  |  | 236 | . . |  | I |  | . |
| 190 | . | . | . | I | . | 237 | . | I |  | . | $\ldots$ |
| 191 | . | 4 | 5 | . | . | 238 | . |  | I |  | . |
| 192 | 3 | I |  | . | . | 239 | . |  | I |  | . |
| 193 |  |  | $2 ?$ | . | . | 240 | . | 3 | 2 | . | I |
| 194 | $\cdots$ |  | . | 6 | . | 24 I | . | . . | I | . | . |
| 195 | I | 6 |  | . | . | 242 | . . | $\ldots$ | . . | . . | I |
| 196 | . | I |  | . | . | 243 | . | I | 2 | . | . |
| 197 | $\cdots$ | 3 | I | . | . | 244 | . . | . | I | . | . |
| 198 | $2 ?$ |  | . | I | . | 245 | . | I | I | . | . |
| 199 |  | 2 | . | . |  | 246 | 2 |  | I |  | . |
| 200 | . |  | 2 | I | . | 247 | . . | I |  |  | . |
| 201 | . . |  | 2 | . . | . . | 248 | . . | I | . . |  | $\cdots$ |
| 202 | . | 3 | I |  |  | 249 | . | I | . |  | . |
| 203 | . | I | . | . . | . | 250 |  | 2 | . | . | . |
| 204 | . |  | I | . . | . | 251 | . | I? | . |  | $\ldots$ |
| 205 | . | I ? | . | . | . | 252 | I | . . | . | . | . |
| 206 | . |  | . | I |  | 253 |  |  | I | . | . |
| 207 | . |  | . | I |  | 254 | . | . | . | I | . |
| 208 | . | I | . | . . |  | 255 |  | I | . | . . | . |
| 209 | . . | 2 | 3 | 3 | . . | 256 | I | 4 | . | . | . |
| 210 | . . | I | 2 | I | I | 257 | 2 | 2 | . | . | . |
| 2 II | . | 3 | 2 | . | . . | 258 | I |  | $\ldots$ | . | . |

Table Showing the Distribution of Pottery - Continued

| Type No. | I | II | III | IV | U | Type No. | I | II | III | IV | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 259 | I | . |  | . | . | 306 |  |  | 4 |  | . |
| 260 | . | 2 | . | . | . | 307 | I | I |  | . | . |
| 261 | . | I | . | . | $\ldots$ | 308 | . . | I |  | $\ldots$ |  |
| 262 | . | 2 | . | . | . . | 309 | I | . |  | . |  |
| 263 | . | 2 | . | . | . | 310 | . | I | . . | . | . . |
| 264 | . | I | . | . | . | 3 II |  | I | . | . | . |
| 265 | . | 3 | . | $\ldots$ | . | 312 | . |  | 2 | . | . |
| 266 | . | 2 | $\cdots$ | $\ldots$ | . | 313 | I |  | . . | . | . |
| 267 | . |  | I ? | . . | . | 314 | I |  | . | . | . |
| 268 | I | . | . | . | . | 315 |  | I | . | . | . |
| 269 | 2 | I | . | . | $\ldots$ | 316 |  |  | . | . | I |
| 270 | I | 3 | I | . | . | 317 | . |  | I | . | $\ldots$ |
| 271 | 2 | . | . | . | . | 318 | I | . | . . | . | . . |
| 272 | . | I ? | . | . | . . | 319 |  | 2 | . . | . | . |
| 273 | I ? | . | . | . | . | 320 | . | I | . | . | . . |
| 274 | I | . | . | . | . | 32 I | . . | I4 | I | I | . |
| 275 | . | . | I | . | . | 322 | . | I |  |  | . |
| 276 | . | . | 3 | . |  | 323 | . | I |  | . | . |
| 277 | . | . | I | $\ldots$ | . | 324 | . | . | . | . | I |
| 278 | . | . | I | . |  | 325 | . | I |  |  | . . |
| 279 | I | I | I | . | . | 326 | I |  | . | . | . |
| 280 | 2 | 2 |  | . | I | 327 | . . | . | I | . | $\ldots$ |
| 281 |  | 1 | . | . | . | 328 | . . | I | . | . | . |
| 282 | . | I? | . | . | . | 329 |  | 5 | . |  | 2 |
| 283 | . |  | I | $\ldots$ | . | 330 |  |  | I |  |  |
| 284 | I | I | . | . . | . | 331 | I | . | . . | $\ldots$ | . |
| 285 | I | . | . | . | . | 332 |  | I |  |  | . |
| 286 | I | . |  | . | . | 333 |  | I | . . | . | . |
| 287 |  | I | . | . | . | 334 |  | I | . . | . | . |
| 288 |  | 1 |  | . . | . | 335 |  | I | . | $\ldots$ | I |
| 289 | 6 | 2 | . | . | . | 336 | . | I | . |  |  |
| 290 | 2 |  |  |  | I | 337 | . |  | I |  | . |
| 291 |  | . | I | . | . . | 338 | $\ldots$ |  | I |  | . |
| 292 |  | I | . | . | - | 339 |  | 3 | . |  | . |
| 293 | I ? | I | . | . | . | 340 |  | I |  |  | . |
| 294 | . | I | . | . . | . | 341 | . |  | I |  | . |
| 295 | I3 | 3 | . | . | I | 342 | . |  | I | . | . |
| 296 | . . |  | 2 |  | . | 343 |  |  |  | I | . |
| 297 | . | I | . | . | . | 344 | . . | $\cdots$ | I |  | . |
| 298 | . | 5 | 2 | $\ldots$ | . | 345 |  | I |  |  | . |
| 299 | . | . . | 3 | . | . | 346 | . | 1 | 2 |  | A |
| 300 | . . |  | 3 | . | I | 347 | 7 | 7 | I |  | A |
| 301 | . |  | I | . | . | 348 | . . | I |  | . | . . |
| 302 | . | $\cdots$ | 2 | . | . | 349 | . . | . . | I | . | I |
| 303 | . | 8 | 5 | . | I | 350 |  |  | I | . | . . |
| 304 | . | . | I | . |  | 35 I |  | $\cdots$ | I | . | . |
| 305 | . | . | I | . |  | 352 | . | . | I |  | . |

Table Showing the Distribution of Pottery - Concluded

| Type No. | I | II | III | IV | U | Type No. | I | II | III | IV | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 353 | 3 | . | . |  |  | 387 |  | I |  |  |  |
| 354 |  | 14 | 56 | . | A | 388 | A | A | A | A |  |
| 355 |  | 9 | 15 | 2 | A | 389 | A | A | A | A |  |
| 356 |  | 6 | 6 |  | A | 390 | A | A | A | A |  |
| 357 |  | 13 | 13 |  | A | 391 | A | A | A | A |  |
| 358 | 9 | 18 | 10 | 2 | A | 392 |  | 6 | 13 | . . | 3 |
| 359 |  | I | . | . |  | 393 |  | I | 2 | . |  |
| 360 | 2 | 23 | 16 | I | A | 394 | 3 |  | 2 | I | I |
| 361 | 2 | 10 | 17 |  | A | 395 | I |  |  |  |  |
| 362 |  | 3 | 17 |  | A | 396 |  | 8 | 8 | . | I |
| 363 | . | . |  |  | I | 397 | 1 | 6 | 3 | I |  |
| 364 | I |  |  | I | . | 398 | 2 | . |  |  |  |
| 365 |  |  | 4 |  |  | 399 | I | 6 | 7 | $\cdots$ | I |
| 366 | 2 |  |  |  | I | 400 | 2 | II | 22 | $\cdots$ | 3 |
| 367 |  | 1 |  |  | . | 401 | 1 | II | 33 | $\cdots$ | 3 |
| 368 |  | 3 |  | - | I | 402 | 1 ? | 2 | 3 |  | I |
| 369 |  | 1 |  | . | . | 403 |  | 1 | 4 | 1 | . . |
| 370 |  |  |  |  | I | 404 |  | 2 |  |  |  |
| 37 I |  |  |  |  | I | 405 |  | 2 | 1 | . |  |
| 372 |  |  | 2 | . |  | 406 |  |  | . | . | I |
| 373 |  |  | I |  |  | 407 |  |  | I | . |  |
| 374 | 8 | 22 | 12 | $\cdots$ | A | 408 |  |  | 3 |  | . |
| 375 |  | 14 | 3 | . | 2 | 409 |  |  | I |  |  |
| 376 |  | I |  | $\cdots$ |  | 410 | I | 6 | 1 |  |  |
| 377 |  |  | 2 | . |  | 411 |  |  | 2 |  | . |
| 378 |  |  | 1 ? | $\cdots$ |  | 412 | I | 8 | 3 |  | I |
| 379 |  |  | 1 | . | $\ldots$ | 413 | 5 | I |  | . | . |
| 380 |  |  | 5 | . | . | 414 |  |  |  |  | I |
| 38 I |  |  | I | . | . | 415 | I |  |  | . | . |
| 382 |  |  | I | . | . | 416 |  |  | I |  | . |
| 383 |  | I |  | . |  | 417 |  | 2 |  |  |  |
| 384 |  | I | I |  |  | Total | 208 | 66I | 582 | 51 | 90 |
| 385 386 | . | I | $\ldots$ | I | . |  | and T | otal | 5 | 5 | $59^{2}$ |

## VI. CATALOG OF POTTERY TYPES

## DEFINITIONS

The following definitions have been adopted as laid down by a conference of expedition leaders at Baghdad, Iraq, January 16, 193I :
Burnished. - Polished with a pebble or bone.
Glazed. - Covered by a vitrified siliceous paste.
Slip. - A paste of fine clay added after the making of a vessel.
Wash. - A paint or coloring matter without clay added after the shaping of the vessel.

To these definitions the following may be added:
Crazed. - Covered with a network of fine lines caused by unequal expansion between body and glaze, similar to the artificially produced crackle.
Flaking. - Complete separation of body and glaze caused by extreme differences of expansion between them.
Leather-hard. - That degree of hardness attained by drying pottery when it may still be easily cut with a knife.
Paring. - The cutting away of the leather-hard walls of a vessel to reduce the thickness beyond the point obtainable upon the wheel.

## EXPLANATION OF TEXT ACCOMPANYING DRAWINGS

All measurements are given in centimeters.
Pottery with any glaze is classed as glazed; if the glaze is not mentioned in the description, the vessel is unglazed.
All pottery is complete or else has a drawing shape which can be restored with certainty. Exceptions are indicated by dotted lines.
All pottery is from Block " $B$," the main area under excavation, unless otherwise noted.
A question mark after the description of the body or texture of a vessel indicates that it was not visible because of the presence of a slip, wash, or glaze.

No distinction has been made between pottery awarded to the University of Michigan, the Toledo Museum of Art, and the Cleveland Museum of Art because no complete, final division had been made at the time when the material was being studied. Those pieces in the Iraq Museum, Baghdad, are indicated by the word "Baghdad." Note that only a small proportion of the pieces remaining in Iraq are here presented, since many of the vessels there have been listed under some of the type pots awarded to the Expedition.

## EXPLANATIONS OF TERMS, ABBREVIATIONS, AND NUMBERS USED IN THE CATALOG

Bowl, Jar, Jug, etc. - More or less arbitrary terms intended merely to furnish suggestions in regard to the character of the vessels.
Reddish buff body. - A description of the color of the undecorated baked clay.
Fine texture. - The quality of the reddish buff clay body when baked.
Green glaze. - A description of the glaze, wash, or slip employed over the body; if such description is omitted, there is no glaze, wash, or slip.
Well made. - A description intended to give an approximate idea of the workmanship employed on a vessel.
H. - Height in centimeters.
D. - Diameters in centimeters, in the following order: (a) top; (b) greatest diameter; (c) base.
L. - Length. All measurements of lamps are the greatest dimensions.

III, $I_{3} 6$ sub or III, $\mathrm{I}_{3} 6$ sub, IV. - In such designations the first Roman number indicates the level, beginning with the topmost. The Arabic number is that of the room in which the object was found. "Sub" signifies that the vessel was found below the floor level. In some cases sufficient evidence was discovered to reassign the object to the next lower level.
(II) or (II-III). - Bracketed Roman numbers indicate the level or levels in which the majority of vessels of a particular type were found. Type vessels were selected because they were good specimens. They may, therefore, be from a different level than the majority of the vessels of the same type.
Arabic numbers at the end of items are those of the expedition registry. They were placed upon the pottery itself.
I. Reddish buff body, fine texture, well made. Probably pared. H. 2.8, D. г2.0. III, I36. IO49
2. Reddish buff body, fine texture, fairly well made. H. 2.9, D. іг.5. II, 67. 4788
3. Cream body, fine texture, well made. Pared. H. 4.3, D. I3.0. III, 187 (possibly belonging to grave 222). 10683. Some of this ware is scarcely thicker than an ostrich egg shell. Paring was done with a knife after the ware had become leather-hard, but the better vessels were then recentered on the wheel and the marks of the knife were removed by means of some tool. The few examples of this ware which were recovered more or less intact were solely from Levels II and III.
4. Buff body exterior, reddish interior due to firing, fine texture, well made. H. 6.5, D. 17.9 (Baghdad). I, 43. 4177
5. Cream body, very fine texture, well made. Pared. H. 9.0?, D. 18.5. III, 187 in thick layer of ashes. Io8 I5
6. Cream body, fine texture, very well made. H. 7.0, D. i4.0. III, trial trench 3I, 7 meters (III or IV). 7298
7. Buff body, medium texture, well made, partly filled with bitumen. H. 5.3, D. I3.0, 5.3. II, 160 (III?). 8538
8. Buff body red due to underfiring, medium texture, crudely made. H. 3.5, D. if.i, 3.8 (Baghdad). II, 58 sub (II-III). 6898
9. Buff body, fine (?) texture, well made. H. 7.0, D. 8.8, 3.0 . II, 238 in large jar. 5924
ıо. Buff body, medium texture, fairly well made. H. 6.0, D. i2.0, 4.6. II, I3O floor. 6774

FIGURES $1-10$
Scale 2:5


UNGLAZED BOWLS

## UNGLAZED BOWLS

ir. Cream body, coarse texture, fairly well made. Lined with bitumen. H. 19.5, D. 30.0, 10.8. Block A, I, 190 (I-III). 36 I $_{2}$. Note the hole in the center of the base, the purpose of which is not apparent. This vessel may have been used as a drain and a small plug of wood or clay may have fitted into this hole.
12. Buff body, medium texture, well made. H. 22.5, D. 31.5, 16.2. II, 65.4666
13. Buff body, medium texture, fairly well made. H. 9.0, D. 33.0, 36.0. II, I21 floor. $5^{277}$. Vessels exactly like this one are in common use today in Mesopotamia as containers of burning charcoal, which can thus be carried safely into a house the floors of which are covered with reed matting or rugs.
14. Buff body, medium texture, fairly well made. H. 14.5, D. 26.0, 7.5. II, II7 floor (II-III). 5204
15. Light red body, fine texture, fairly well made. H. 6.5, D. 8.8, 4.5. II, 34. 4266
16. Buff body, fine texture, well made. H. 5.6, D. ir.2, 5.0. II, 176 sub. 7202
17. Buff body, medium texture, crudely made. H. 8.7, D. 8.7, II.2, 5.O. III, 22. 6934
18. Buff body, fine texture, well made. Pared. H. 2.9, D. 6.8, 7.0, 3.0. III, 16 sub, IV. 11862
19. Buff body, fine (?) texture, very well made. H. 9.5, D. 15.5, I4.0, 4.9. III, 44.7070

FIGURES 11-19
Scale 1:5




Scale 2:5


UNGLAZED BOWLS
20. Buff body, fine (?) texture, well made. H. 2.2, D. 7.0, 7.8, 2.5. II, 36 (II-III). 4367
2I. Reddish buff body, fine texture, fairly well made. H. 3.0, D. I2.2, 4.0. II, 48 sub (III). 7 II 8
22. Reddish buff body, coarse texture, fairly well made. H. 4.5, D. I2.0, 5.O. Surface. 6407
23. Cream body, medium texture, very well made. H. 5.2, D. I5.2, 4.5 (Baghdad). II, I33. 5375
24. Cream body (underfired), medium (?) texture, fairly well made. H. 5.0, D. I8.0, 4.5. II, 38 sub. 7392
25. Cream body, medium texture, hand-made (?), partly covered with bitumen. H. 5.9, D. I3.0, 4.5. Street 227, opposite II, I78 (I-II). 5668
26. Buff body, medium (?) texture, fairly well made. H. 7.5, D. 2I.5, 4.5. II, II3. 4146
27. Buff body, fine texture, well made. H. 2.9, D. 9.I, 6.9. III, 16. 7286
28. Cream body, fine (?) texture, well made. Perforation in center. H. 2.2, D. 8.I, 4.3. I, 200 (I-II). 3898
29. Buff body, fine texture, well made. Perforation in center. H. 2.2, D. 8.4, 5.7. III, 6. 7042. The small hole in the center of this pot cover as well as that in No. 28 were presumably used for a string which was knotted on the inside and might thus serve as a handle.

Scale 2:5


Scale 1:2


UNGLAZED POT COVERS

## UNGLAZED POT COVERS

30. Buff body, fine texture, fairly well made. Perforation in center. H. I.3, D. 5.O. Block E, I, 228 (in débris). 6IOI
31. Red body, fine texture, hand-made. Petal design around top. H. (actual) 3.8, (reconstructed) $4 \cdot 3$, D. 5.5. II, 247 sub? (III). 6350
32. Reddish buff body, fine texture, fairly well made. Molded vertically in two sections. H. 8.0, D. io.o (Baghdad). II, I73. 6295
33. Cream body, fine (?) texture, hand-made. H. 2.9, D. 6.I. III, 196. II370
34. Cream body, coarse texture, crudely made. H. 5.I, D. I6.9, 5.0. I, 200, II. 3964
35. Buff body, medium (?) texture, crudely made. H. i.o, D. 4.5. III, 74. 8544. Note hole in top for string handle; cf. No. 29.
36. Cream body, medium texture, crudely made by hand. H. 2.5, D. 7.5. III, 32 sub, IV. 7643
37. Reddish buff body, medium texture, crudely made by hand. H. 4.2, D. ェ6.0. I, 94 (I-III). 3720

FIGURES 30-37

Scale as marked


UNGLAZED POT COVERS

## UNGLAZED COSMETIC POTS

38. Cream body, fine texture, fairly well made. H. 2.0, D. 2.5, 3.4, 2.3 (Baghdad). III, 35. 7374
39. Cream body, fine texture, crudely made. H. 2.0, D. 2.5, 3.0, 2.4. III, 207. III8I
40. Cream body, fine texture, well made. H. 2.0, D. 2.2, 2.4, 2.0 (Baghdad). Trial trench 3I, Io meters (IV?). 7779
4I. Buff body, fine texture, well made. Rough underfired interior. H. 2.3, D. 2.6, 3.2, 2.0. III, 45. 7688
41. Buff body, fine (?) texture, well made. H. 2.I, D. 3.I, 3.4, 2.4. II, 167 (II-III). 5629
42. Buff body, fine (?) texture, crudely made. H. 2.5, D. 3.0, 3.I, 2.0. II, I93 (II-III). 5889
43. Cream body, fine texture, fairly well made. H. 2.8, D. 2.7, 3.0, 1.9. III, 2. 7305. Pl. XIV
44. Buff body, medium (?) texture, fairly well made. H. 2.8, D. 3.4, 3.7, 1.7. III, 94. 8826
45. Buff body, fine texture, fairly well made. H. 3.2, D. 3.2, 3.2, 2.4. II, II3 (II-III). 5I36
46. Buff body, fine texture, well made. H. 3.6, D. 3.4, 4.2, 2.4. II, 232 (II-III). 6002
47. Black (overfired) body, fine texture, well made. H. 4.o, D. 3.2, 4.5, 2.4. III, I98. III46. Pl. XIV
48. Reddish buff body, medium texture, fairly well made. H. 4.0, D. 3.3, 4.8, 2.0. II, 55 sub. II 258

FIGURES 38-49

## Scale 1:1



UNGLAZED COSMETIC POTS
50. Buff body, fine (?) texture, well made. H. 4.2, D. 3.0, 4.2, 2.3 (Baghdad). III, Street 36 opposite III, 182. 1о7ı6
5I. Buff body, fine texture, well made. H. 5.0, D. 4.I, 6.0, 3.I. I, 20I (II-III). 3969
52. Cream body, fine texture, fairly well made. H. 5.4, D. 3.4, 5.0, 2.4 (Baghdad). I, I90 (II). 3896
53. Buff body (reddish interior due to underfiring), fine (?) texture, fairly well made. H. 5.6, D. $3.7,5.5,2.6$. I, 248 (II-III). 3872
54. Reddish body, fine texture, red wash, burnished, very well made. H. 5.8, D. 3.7, 5.8, 2.2. III, 2I6, grave 23I. II4I3. See text, pp. I6 and 22 .
55. Buff body, medium texture, fairly well made. H. 6.0, D. 3.5, 5.4, 3.6. II, I73 in mud brickwork. 6096. Cf. similar shape, De Morgan, Dél. en Perse, Mém. I, 59, Fig. ı3, yellow body, turquoise-blue glaze.
56. Cream body, fine texture, fairly well made. H. 5.3, D. 2.7, 4.0, 2.4. I, 26I, II (II-IV). 443I
57. Cosmetic dish. - Red body, fine texture, red wash, fairly well made. H. 2.4, D. 3.8, 1.8 (Baghdad). II, I26 (probably III). 5555
58. Cream body, medium texture, fairly well made. H. 3.2, D. 2.2, 2.9, i.6. I, 107 (I-III). 3680
59. Cream body, medium texture, fairly well made. H. 2.6, D. 2.8, 4.3, 3.5 (Baghdad). II, I75. 6I72
60. Cosmetic dish. - Buff body, medium texture, fairly well made. H. 2.3, D. 4.0, 4.8, 2.8. Trial trench 3I, Io meters (IV?). 7780 . Pl. XIV
61. Cosmetic dish. - Cream body, fine (?) texture, well made. H. I.2, D. 3.0 (top rim), 4.I (lower rim), 2.8. III, ェ26. 9428. Pl. XIV
62. Cosmetic dish. - Buff body, medium texture, crudely made. H. I.5, D. 4.3, 3.o. I, 236, II, from mud brickwork (II). 4930

## FIGURES 50-62

## Scale 1:2



## Scale 1:1



UNGLAZED COSMETIC POTS

## UNGLAZED JARS, NO HANDLES

63. Buff body, medium texture, fairly well made. H. 6.7, D. 4.0, $6.3,3.0$. III, II4. 991 I
64. Cream body, fine texture, crudely made. H. 6.8, D. 3.0, 5.6, 2.5. III, I39 lowest floor level. IoI48
65. Buff body, fine texture, fairly well made. H. 8.5, D. 3.3, 6.7, 2.8. II, 83 (I-III). 5093. Pl. XIV
66. Reddish buff body, fine texture, well made. H. 7.2, D. 4.7, 7.2, 4.0 (Baghdad). II, i19 floor (II-III). 5436. Pl. XIV
67. Buff body, medium texture, fairly well made. Scaling due to improper firing. H. 8.3, D. 5.0, 8.8, 4.6. III, 16 sub, IV. 7792
68. Buff body, medium texture, well made. H. 9.6, D. 6.7, го.2, 5.0. III, IO3 sub. 9014
69. Reddish buff body, fine (?) texture, well made. H. 9.0, D. 5.4, 9.6, 6.I. III, 4I. 7203
70. Goblet? - Buff body, fine (?) texture, well made. H. 5.8, D. 4.3, 3.2, 2.5. I, Street 32. 9019

7I. Buff body, medium texture, very crudely made. H. 7.4, D. 5.5, 7.8, 4.I. I, 195. 3705
72. Buff body, fine texture, well made. H. 16.4, D. 6.0, ir.0, 5.0. II, 77 floor level. 5089
73. Bottle, buff body, fine texture, red wash, well made. Vertical burnishing. H. 14.5, D. 3.5, 4.5, 2.4. II (?), 242, burial 95 (II-III). 48ㄷ. Pl. VIII, Fig. 3
74. Bottle, light red body (probably due to firing), fine texture, fairly well made. H. 12.2, D. 2.2, 4.2, 2.5 (Baghdad). I, 218 near wall foundation (I-III). 3873. Pl. VIII, Fig. I


UNGLAZED JARS, NO HANDLES
75. With spout. - Buff body, fine texture, well made. Spout stuck on. H. 6.9, D. 4.3, 6.9, 3.0. II, 164. 6933. Cf. Nos. 76, ${ }^{17} 6-177$, and 333. This type is no longer to be found in Mesopotamia.
76. With spout. - Buff body, medium (?) texture, well made. H. 7.8, D. 4.0, 6.3, 3.0 (Baghdad). II, I34 probably sub. 8648. Cf. Nos. 75, i76-177, and 333.
77. Cream body, fine texture, fairly well made. Perforation in side. H. ті.7, D. 3.0, 6.5. I, iog floor. 5141. Cf. Nos. 78, 8i, and 84 , and see text, p. i8.
78. Buff body, fine texture, well made. Perforation in side. H. I3.0, D. 2.5, 6.6 (Baghdad). II, I39 in north wall. 6223. Cf. Nos. $77,8 \mathrm{I}$, and 84, and see text, p. 18.
79. Reddish buff body, fine texture, molded longitudinally in two parts. H. i4.0, D. 3.0, 7.0. II, 68 sub. 4543. See Fig. I, p. I3.

8o. Buff body, medium (?) texture, fairly well made, partly by wheel and partly by hand. H. 16.8, D. 2.7, 7.2. II, 33. 6174
81. Cream body, medium texture, well made. Possibly made in two parts. Perforation in side. H. 14.8, D. 4.2, 9.2. In well in I, 236. iti80. Cf. Nos. 77, 78, and 84.
82. Buff body, fine texture, well made. H. ıо.0, D. 4.0, 7.0. III, iI8. 9243
83. Reddish buff body, medium texture, fairly well made. H. 21.5, D. І2.3, І6.2. II, I48 floor (III?). 5406
84. Buff body (underfired), medium texture, well made. Perforation in side. H. 21.3, D. 5.5, if.o. I, 61. 4669. Cf. Nos. 77, 78 , and 8 r.
85. Buff body, medium texture, well made. Pared around base. H. ı9.0, D. 5.5, 10.5 (Baghdad). I, 169 in mud brickwork. 5618
86. Buff body, medium texture, well made. H. i9.0, D. 7.0, 15.0. II, II2. 4247

## FIGURES 75-86

## Scale 2:5



Scale 1:5


UNGLAZED JARS, NO HANDLES

## UNGLAZED JARS, NO HANDLES

87. Cream body, medium texture, crudely made. H. ı2.0, D. 5.0, $6.7,3.6$. I, і97. 380 I
88. Cream body, coarse texture, fairly well made. H. ı2.2, D. 6.2, 7.8, 5.2. III, 18 floor. 7 II5
89. Reddish brown body, coarse texture, fairly well made. H. 22.2, D. 12.2, 20.0, 10.1. II, 112. 4071. For decoration see sketch 4, Pl. A.
90. Reddish buff body, coarse texture, fairly well made. H. 28.5, D. 13.0, 25.1, I3.0. III, 6. 6739
91. Buff body, very coarse texture, crudely made. H. 34.0, D. 15.0, 30.8, i3.0. III, 49. 7537. Note potter's mark. The design around the central portion of the jar may have been made with a running stamp.
92. Reddish buff body, medium texture, well made. H. 38.5, D. I3.0, 27.5 , I3.5. II, II3. 4288. Decorated with crude dots and chevron pattern scratched into the vessel before drying. For decoration see sketch $7, \mathrm{Pl}$. A.
93. Buff body, medium texture, well made. H. 42.0, D. 12.5, 29.0 . I, I48. 3770
94. Composite jars. - Inside of inner jar covered with green glaze. Crude concrete between jars, probably similar in composition to that used in street paving near by. Inner jar, H. 50.8, D. 52.6. Outer jar, H. 61.0, D. 62.2, 30.5. II, 68 in floor. 7512. The purpose of this arrangement is uncertain. One suggestion might be that someone desired to secure a storage jar which would have a flat bottom, and that this combination was the result of the utilization of scrap materials.

## SCALE AS MARKED



FIGURES 87-94


95. Storage jar. - Buff body, coarse texture, well made. H. 86.0, D. 16.0, 37.0. This type is common in drains of Levels I and II, but its primary purpose was for storage. Unregistered. See text, pp. 17-18, for a discussion of these jars used for burials and as substructure drains for houses. Often these jars were lined with bitumen; in a considerable number of them a small hole had been drilled in the upper portion for some purpose yet undetermined. This may possibly have been intended to make measures of them. See text, p. i8.
96. Storage jar. - Buff body, coarse texture, well made. H. ior.o, D. 18.0, 38.0. This type is also common in drains of Levels I and II. Unregistered
97. Dark brown body, coarse texture, fairly well made. Bitumen lined and bitumen half down outside. H. 71.0, D. 70.0. I, 262. 7513. See photograph of drain below, Fig. 7 .
98. Storage jar. - Buff body, coarse texture, crudely made in two pieces. H. 55.0, D. 13.7, 33.0 . III, 305 , III level drain. II433. This type is common in Level III, and like Nos. 95 and 96 was used for both storage and drainage purposes.
99. Storage jar. - Chocolate-brown body, coarse texture, made in two pieces. H. 124.0, D. 22.0, 68.0. Trial trench 18, I, near grave I, contained fragments of burial. Unregistered


Fig. 7. Hib and storage jars used as subsoil drain


1о0. Buff body (underfired), medium texture, fairly well made. H. 5.7, D. 5.0, 6.3. II, 68 sub. 7240
ıог. Buff body (underfired), medium texture, crudely made. Handle stuck on. H. 7.3, D. 3.7. 5.0, 4.5. Surface. 4122. This type of vessel with nearly straight sides and a broad flat base seems to be characteristic of the material of Level I. Cf. No. I60.
102. Buff body, medium texture, fairly well made. H. 5.0, D. 2.8, 3.5, 3.0. II, 93.5690
103. Reddish buff body, fine texture, fairly well made by hand. H. 5.5, D. 2.5, 3.7, 2.5 (Baghdad). I, 140 in top mud brickwork. 4694
104. Buff body, fine texture, fairly well made. H. 8.0, D. 5.0, 8.1, 4.8. Street 227 opposite II, 178 (II). 5667
105. Cream body, fine texture, well made. Handle stuck on. H. 9.5, D. $5.5,8.6,3.5$. II, 238 in large jar. 5925
106. Light red body, fine texture, fairly well made. H. го.6, D. 4.7, 8.I, 3.O. II, II2 (I-II). 4268
107. Buff body, medium texture, well made. H. 9.6, D. 6.4, io.0, 4.6. I, 25 I, II. 4638
108. Buff body (underfired), fine texture, well made. H. 9.5, D. 3.3, 7.2, 3.2. I, 62 sub, II. 5234
109. Buff body (underfired), fine texture, fairly well made. Handle stuck on. H. ı..0, D. 4.3, 7.2, 3.1. II, 68 (III). 6285

## Scale 1:2



UNGLAZED JUGS, ONE HANDLE

## UNGLAZED JUGS, ONE HANDLE

iro. Cream body, medium texture, well made. Handle stuck on. H. 9.7, D. 5.0, 7.0, 3.2. II, I59 floor (II-III). 5480
iri. Cream body, fine texture, fairly well made. H. 7.7, D. 4.I, 5.8, 3.3 (Baghdad). II, Street io (II-III). $537^{2}$
112. Buff body, medium texture, fairly well made. H. 8.8, D. 3.2, 5.6, 2.5. I, 18ı. 3226
iI3. Buff body, fine texture, well made. Handle stuck on. H. 6.2, D. 2.6, 4.6, 2.8. I, 253 sub, II. 5280
114. Buff body (overfired), medium texture, fairly well made. Handle stuck on. H. 8.i, D. 3.5, 7.6, 4.6. II, it2. 3980
115. Buff body, fine texture, well made. H. 8.5, D. 3.0, 6.5, 2.8. Trial trench 3I, 4 meters (III?). 7100
1ı6. Buff body, fine texture, fairly well made. H. 7.9, D. 3.6, 5.4, 2.7. II, 62 sub (II-III). 6686
i17. Buff body, medium texture, well made. Pouring lip. H. ir.3, D. 7.3, 10.3, 4.6. III, 200. 10938
ı18. Buff body, fine texture, fairly well made. H. io.8, D. 5.0, 9.0, 3.8. II, 446 sub. 6932
rig. Cream body, medium texture, well made. Handle stuck on. H. I3.7, D. 5.9, 10.6, 5.2. I, 246 (II). 4298


## Scale 2:5



UNGLAZED JUGS, ONE HANDLE

## UNGLAZED JUGS, ONE HANDLE

120. Buff body, medium texture, fairly well made. H. 5.8, D. 3.5, 5.2, 2.3. III, 197. 11476

12I. Buff body (underfired), medium texture, well made. H. 6.5, D. 4.5, 5.4, 2.8. III, I84. II304
122. Cream body, medium texture, fairly well made. H. 7.8, D. 4.4, 6.3, 2.7. I, і4І. 3836
123. Buff body, fine texture, well made. H. 8.2, D. 4.6, 6.3, 3.5 (Baghdad). III, 40. 7496
124. Buff body, fine texture, well made. Pouring lip. H. 7.3, D. $5.5,7.6,4.2$. III, burial 172 . 7369
125. Buff body, medium texture, crudely made. Pouring lip. H. ı2.5, D. 5.0, 8.3, 3.6. II, 174 sub, IV. 7787
126. Cream body, medium texture, fairly well made. Pouring lip. Made in two pieces and joined at the greatest diameter. H. i2.3, D. $4.5,9.5,4.3$. III, 37 sub, IV. 7693
127. Buff body, fine texture, well made. H. 12.5, D. 4.8, 9.8, 3.8 (Baghdad). II, Io7 sub. 6004
128. Cream body, medium texture, fairly well made, in two pieces. H. I3.0, D. 4.5, 9.3, 4.2. III, 38.7301
129. Cream body, medium texture, fairly well made, in two pieces. H. ı3.8, D. $4.5,9.3,4.0$. III, 22 sub. 7608
130. Cream body, medium texture, well made, in two pieces. H. i4.5, D. $4.5,10.2,4.5$ III, 45.7607

Scale 2:5


UNGLAZED JUGS, ONE HANDLE

## unglazed jugs, ONE HANDLE

I3I. Buff body, fine texture, crudely made. Pouring lip. H. 8.2 D. $5.0,8.3,3.8$. II, I40 sub. 6629
132. Buff body (underfired), fine texture, well made. Handle stuck on. H. iл.ı, D. 6.o, Іо.5, 4.о. II, ェ7०. 6468
133. Buff body, medium texture, well made. Handle stuck on. H. i2.0, D. 7.7, 9.8, 4.7. II, 96 sub (III?). 6500
134. Buff body, medium texture, well made. H. i2.5, D. 6.5, ix.o, 4.O. II, Street IO, foundations. 6099
135. Buff body, medium texture, fairly well made. H. I2.5, D. 5.0, 9.5, 4.O. I, I99, II. 4069
136. Buff body, medium texture, fairly well made. Pouring lip. Handle stuck on. H. ıо.5, D. 4.о, 7.2, 3.5. I, I34, II. 4 I 82
I37. Cream body, medium texture, fairly well made. Handle stuck on. H. I5.3, D. 6.5, 9.2, 2.9. I, 207 floor level? 3624
I38. Cream body, medium texture, fairly well made. Pouring lip. H. i7.0, D. 5.5, it.i, 3.I. I, 87. 3690
139. Cream body, medium texture, well made. Handle stuck on. H. 15.9, D. 5.0, 9.8, 2.9. I, 207 under Level II pavement (III-IV). $365^{2}$


UNGLAZED JUGS, ONE HANDLE
69
140. Buff body, fine texture, fairly well made. H. i6.5, D. io.o, 13.8, 5.5. In well in I, I3I. IO24I
141. Buff body (underfired), medium texture, well made. Decorated shoulder. H. 22.0, D. 14.0, 20.5, í.0. I, 33. 4I42. For decoration see sketch 2, Pl. B.
142. Buff body, medium texture, fairly well made. Shoulder decorated with chevron pattern. H. 25.5 , D. I3.3, 2 I.I, 15.0. I, 108 in drain. 5616
143. Buff body, medium texture, well made. Handle stuck on. Cross-line decoration on neck with chevron pattern on shoulder. H. i7.5, D. ıо.0, i5.0, 4.5 (Baghdad). II, 98. 5286. For decoration see sketch I , Pl. B.
144. Buff body, coarse texture, well made. Handle stuck on and neck added as separate piece. H. 20.0, D. ir.8, 16.2, 7.0. II, 33. 6222
145. Buff body, medium texture, fairly well made. Pouring lip. Handle stuck on. H. i5.4, D. iо.0, i3.6, 5.5. II, 83 sub. 6406
146. Buff body, fine texture, well made. Handle stuck on. H. ı6.4, D. if.0, I4.2, 6.8. II, 34. 4299
147. Cream body, medium (?) texture, well made. H. 29.5, D. 12.5, $23.5,9.2$. In well in I, I3I. 10243
r48. Buff body, coarse texture, fairly well made. H. 18.7, D. 7.0, го.о, 7.6. III, i6 sub. 7405
149. Buff body (slightly underfired), medium texture, well made. Н. i5.5, D. 6.0, іо.6, 8.5. III, 196. 11530


UNGLAZED JUGS, ONE HANDLE

## UNGLAZED JUGS, ONE HANDLE

I50. Buff body, fine texture, fairly well made. H. ェ6.о, D. ıо.о, I4.I, 6.0. II, II2 sub. 6633. Pl. IV, Fig. 2
I5I. Buff body, medium texture, well made. Pouring lip. Handle stuck on. H. 24.0, D. 9.0, I5.5, 6.0. I, 200, II. 3991
I52. Buff body, medium texture, well made. H. 24.8, D. ıо.о, 16.3, 6.8 (Baghdad). I, 200 (II). 3990

I53. Buff body, coarse texture, well made. Inside covered with bitumen. H. 25.3, D. 9.0, I9.5, 7.5 (Baghdad). I, 66. $375^{2}$
I 54. Cream body, medium texture, fairly well made. H. 26.0, D. 9.8, 17.8, 6.5. Street 32 (I?). 4718

I55. Cream body, medium texture, well made. H. 26.0, D. 9.5, 18.0, 6.8. In well in I, 13I. IO247

I56. Cream body, medium texture, well made. H. 27.2, D. 9.0?, I5.3, 7.0. In well in IV below III, 36. I2O26
157. Buff body, medium texture, well made. Pouring lip. Handle stuck on. H. 23.0, D. 7.0, I5.8, 6.0. II, 58. 4639
r 58. Buff body, fine texture, fairly well made. Pouring lip. H. 25.8, D. 6.7, 17.6, 7.2 (Baghdad). I, 200, II. 3992


UNGLAZED JUGS, ONE HANDLE
159. Reddish buff body, fine texture, very well made. H. 27.4, D. 10.0, 17.0, 6.7. III, 33. 7209
160. Cream body, medium texture, well made. H. 24.4, D. 9.0, 15.0, 10.2. I, 75 foundation. 5617

16т. Buff body, fine texture, well made. Pouring lip. H. г6.5, D. 7.5, 9.7, 4.4. II, 60 sub, III. 7000
162. Buff body, medium texture, well made. H. 22.5, D. 6.0, I3.0, 6.0. II, 60 early occupation floor. 663 I
163. Buff body, fine texture, well made. Handle stuck on. H. 20.5, D. 6.8, it.7, 6.0. II, Street 227, III? 5800. Pl. II. Fig. 2. See text, p. 2I.
164. Buff body, fine texture, very well made. Lower portion pared. Pouring lip. H. 22.6, D. 5.5, if.0, 5.5. III, 1о7. 9064. See text, p. 2I.
165. Cream body, medium texture, well made. Lower portion pared. H. 18.3, D. 4.2, 8.5, 5.0. II, 154. 10760
166. Cream body, fine texture, well made. H. 20.8, D. 6.I, if.5, 6.3. I, 199, II. 4049. Cf. example from Dura-Europos in the Syrian National Museum, Damascus.
167. Cream body, medium texture, very well made. H. 17.7, D. $4.5,9.4,5.5$. II, I62. 5518. Cf. two Parthian pieces from Nineveh, R. Campbell Thompson, "The Nabû Temple at Nineveh," Archaeologia, LXXIX (1929), Pl. LIII, Nos. 125, i26.
168. Cream body, fine texture, well made. H. 17.4, D. 5.5, 8.4, 7.0. II, I29 floor. 6006. Pl. II, Fig. I


Scale 1:5


UNGLAZED JUGS, ONE HANDLE
169. Buff body, fine texture, fairly well made. H. i3.о, D. го.3, I2.I. III, 35. 7241
170. Buff body, coarse texture, fairly well made. Pouring lip. H. 15.0, D. 7.0, I3.8. II, 97. 5199
171. Buff body, medium texture, fairly well made. H. 7.5, D. 5.5, 8.4, 5.0 (Baghdad). III, 16 sub, IV. 7797
172. Cream body, very fine texture, very well made. Body pared from below handles to near base. H. 16.2, D. 6.0, 10.0, 4.4. II, vault 159. 8i40. This is one of the finest examples of what we came to call "eggshell ware." The thickness of the walls of this vessel varies from I .5 mm . to 2.5 mm . The neck and handles were broken, but are complete. In spite of the fact that this example was found in a vault, the ware was not produced for funerary purposes alone, but was evidently in common use. Large numbers of fragments were found in the course of the excavations and quantities of similar sherds are to be seen on the mounds. Naturally, some unusual circumstance was required to preserve so delicate a ware, in this case the shelter of the great brick vault of the tomb. See Fig. 3, p. I7.
173. Cream body, medium texture, well made. H. 15.3, D. 6.0, iт.6, 3.6. I, 259, II. 4246
174. Buff body, fine texture, fairly well made. H. 7.2, D. 3.0, 5.7 , 3.0. I, Street io. 6635
175. Buff (?) body (slightly overfired), medium (?) texture, well made. Handles stuck on. H. ıо.о, D. 4.8, 8.0. II, iI2. 4047. Pl. VIII, Fig. 2
176. Buff body (underfired), fine texture, well made. Spout near base. Н. г3.7, D. 6.3, то.土. II, 58. 5088. This jug was probably a drinking vessel similar to types numbered 75 and 76 . It may have been dipped into a large container of water after a finger had been placed over the small spout. When the finger was removed one might drink without touching the vessel. Spouted jugs of a similar size are used in this manner today in Syria.
177. Buff body, fine texture, fairly well made. H. 12.0, D. 4.8, 9.5 . Block D, i (II). 3693. Cf. No. i76.


UNGLAZED JUGS, TWO HANDLES

## UNGLAZED JUGS, TWO HANDLES

178. Buff body, medium texture, well made. Rope handles. H. I5.3, D. 14.0, I7.0. II, 32 floor? 5429
179. Buff body, coarse texture, well made. H. 28.4, D. 18.0, 29.5. I, 39. 3876
180. Buff body, medium texture, fairly well made. Black marks of paint or bitumen on the neck and shoulder. H. 24.0, D. 8.0, 17.5. In well in I, I3I. IO240
181. Buff body, medium texture, well made. H. 30.I, D. i2.0, 24.0, 8.5. II, 112. 4222. Cf. De Morgan, Dél. en Perse, Mém. I, 59, Fig. 19, yellow body, interior and top light blue glaze.
182. Buff body, fine texture, very well made. Lower portion pared. H. ı8.6, D. 3.0, ı..0, 2.5 (Baghdad). I, 57 (I-II). 4459. Pl. VII, Fig. i. This is another example so thin that it cannot have been made on a potter's wheel, but must have been pared down to the desired thickness after it was partly dry. This type was especially common in Level I and also in Level II, but specimens were almost always found in a fragmentary state because of the fragility of the ware. The base is obviously not intended to hold the vessel upright. For this purpose some ring stand or small jar must have been used, as is the custom today in Syria and Mesopotamia.
183. Buff body, medium texture, very well made. H. 40.5, D. 20.0, 37.0. II, 1 I3. 4i44. This storage vessel, typical of Level II, was occasionally used for infant burials. For decoration see sketches 5 and 6, Pl. A.
184. Cream body, fine texture, hand-made. H. 48.0, D. 16.0, 33.5 . I, 207. 3630
185. Buff body, medium texture, fairly well made. H. 46.0, D. I7.0, 37.0, 17.0. II, 1о6. 5102
186. Buff body, medium texture, well made. H. 28.0, D. i2.0, 23.0, 9.0. II, 77. 5002
187. Buff body, coarse texture, crudely made. H. 21.0, D. 16.0, 23.6, I3.0. II, 105 sub. 6824

188. Cream body, medium texture, gray glaze, well made. H. 5.5, D. $25.5,7.4$. I, 199 (II-IV). 4085
189. Buff body, medium texture, formerly dark green glaze crazed, well made. Spur marks inside. H. 4.6, D. 20.5, 7.3. Block D, 400 (II). 3727
rgo. Buff body, coarse texture, greenish brown glaze, well made. Spur marks inside. H. 3.8, D. I 5.O, 5.5. III, I6 sub, IV. 8003
190. Cream body, medium texture, greenish gray glaze crazed, very well made. Spur marks outside. H. 7.0, D. 2I.I, 7.9. II, 58 (II-III). 5ㄴ46. Pl. VI, Fig. I
191. Cream body, medium texture, light green glaze, well made. H. 5.I, D. 2 I.5, 7.3. I, 264. 5893
192. Buff body, medium texture, green glaze, well made. Spur marks inside and out. H. 5.4, D. 28.0, 12.4 (Baghdad). II, I73 sub (III?). 7238
I94. Cream body, coarse texture, green glaze, very well made. H. 7.2, D. 30.0, if.o. In cache of 13 small bowls, 14 large bowls, 4 jugs. III, I4 sub, IV. 7763
193. Cream body, medium texture, green glaze, very well made. Spur marks inside and out. H. 8.6, D. 26.I, 8.5. II, 58. 5I5I. Pl. VI, Fig. 2
194. Cream body, medium texture, gray glaze, well made. Spur marks inside. H. 8.2, D. 23.5, 8.I. II, 58. 4594
195. Cream body, medium texture, gray-green glaze, well made, H. 8.7, D. $25.0,7.0$ I, I99, II. 4066
196. Buff body, medium texture, gray glaze, well made. H. 8.0, D. 25.0 , 8.0. I, débris (I?). 569 I

I99. Buff body, medium texture, light green glaze, well made. H. 8.o, D. 22.I, 4.0. I, 193, II. 4245

## FIGURES 188-199

SCALE $1: 5$


GLAZED BOWLS


## GLAZED BOWLS

200. Cream body, medium texture, gray formerly green glaze, well made. Spur marks inside and out. H. 7.9, D. 17.7, 7.0. II, 32 sub (III? IV ?). 7205
201. Cream body, medium texture, white (?) glaze finely crazed, well made. Spur marks inside and out. H. ir.8, D. 24.0, 8.5. III, 42. $724^{2}$
202. Buff body, medium texture, gray glaze with dark green rim around upper edge, well made. H. 8.6, D. 23.0, 7.8. II, 124. 5844
203. Plate. - Buff body, medium texture, gray glaze, well made. H. 4.I, D. 32.0. I, 200, II. 4036
204. Buff body, coarse texture, green glaze inside only, crudely made. Crude lines on exterior probably due to paring to reduce weight of bowl. H. 24.8, D. 28.0, 33.5, 12.5. III, 15. 8I3I
205. Cream body, medium texture, brown (?) glaze, well made. H. 2.7, D. II.4, 5.0. II, 60 sub (II? III?). 6897
206. Buff body, coarse texture, possibly two glazes (first mat green and outer yellow now flaking badly), very well made. Spur marks inside and out. H. 3.0, D. 15.0, 7.5. III, I4 sub, IV. 8219
207. Buff body, medium sandy texture, mat gray glaze, fairly well made. H. 4.0, D. 17.5, 9.0. III, 14 sub, IV. 8ı80
208. Buff body, medium texture, green glaze flaking badly, well made. Spur marks inside and out. H. 3.0, D. 10.5, 6.0. II, 212. 8363
209. Buff body, coarse texture, green glaze crazed, well made. Spur marks inside. H. 5.0, D. ir.6, 5.0. II, 174 (II-IV). 6169
2 10. Buff body, medium texture, gray glaze, well made. Spur marks inside and out. H. т.8, D. 8.9, 4.0. II, поо (III). 5205
2II. Buff body, medium texture, gray formerly green glaze crazed, well made. Spur marks inside and out. H. 6.0, D. 15.0, 9.0. II, 103 (II-III). 5845

FIGURES 200-211
Scale 1:5


Scale 2:5


GLAZED BOWLS
8.3

## GLAZED BOWLS

212. Cream body, medium texture, gray glaze with dark green edge around rim, well made. Spur marks inside and out. H. 7.r, D. I4.0, 5.O. II, I62. 8537

2I3. Buff body, medium texture, brown glaze, well made. Spur marks outside. H. 4.5, D. if.o, 5.5. I, Street 32. 9380
214. Buff body, medium texture, gray glaze, fairly well made. Spur marks inside and out. H. 4.2, D. 14.4, 4.5. II or III débris. 7393
215. Cream body, medium texture, sandy gray glaze, probably originally green, well made. Spur marks inside and out. H. 4.4, D. iI.3, 5.0. II, 94 (II-III). 622 I

2I6. Buff body, medium texture, light green glaze with traces of yellow, well made. H. 4.0, D. 9.2, 8.3, 4.0. II, vault i59. 8014
217. Buff body, coarse texture, green (?) glaze, very well made. Spur marks inside and out. H. 6.9, D. 10.8, 13.3, 7.5. Under III, débris in southeast corner of excavation, probably IV. 7540
218. Cream body, medium texture, green glaze, well made. H. 6.8, D. $9.0,5.5$. II, 176 sub. 7204
219. Buff (?) body, coarse texture, yellowish green glaze, fairly well made. H. 6.3, D. I3.9, 5.8. Débris. 234

## Scale 2:5



GLAZED BOWLS

## GLAZED BOWLS

220. Reddish buff body, medium texture, traces of glaze, very well made. Spur marks inside and out. H. 6.o, D. 19.0. II, vault 157. 8062

22I. Cream body, medium texture, gray glaze with yellowish areas, fairly well made. Spur marks inside. H. 5.5, D. 12.0, 5.0 (Baghdad). Under III, I4, IV (III-IV). 7539
222. Buff body, medium texture, gray glaze, well made. H. 7.3, D. I5.5, 6.8. II, 92 sub, III. 7206
223. Cream body, medium texture, faded green glaze, well made. H. 6.0, D. it.2, 5.5. II, 73 sub. 2996
224. Buff body, coarse texture, green glaze, very well made. H. 7.5, D. 17.0, 5.5 . Débris. ${ }^{2147}$. This is undoubtedly Sasanian.
225. Cream body, medium texture, green glaze, well made. Spur marks inside and out. H.6.6, D. if.r, 5.5. III, 203 near grave 227. IIO35
226. Buff body, medium texture, brown sandy glaze, well made. Small spur marks on base. H. 4.0, D. it.2, 4.7. II, 64 (I-II). 4691
227. Cream body, coarse texture, light green glaze, well made. Spur marks inside and out. H. 2.5, D. 6.2, 3.2. II, 173 sub, III. 7235
228. Cream body, medium texture, grayish green glaze formerly dark green, well made. Spur marks outside. H. 2.6, D. ro.0, 5.0. Block D, 404 (I-II). 3743
229. Cream body, fine texture, white glaze probably formerly green crazed, very well made. Spur marks inside. H. 3.8, D. ir.o, 4.5. II, iro. 5154
230. Buff body, medium texture, green glaze, very well made. Spur marks inside and out. H. 3.3, D. 9.0, 4.8. III, I39. Ior 56
23I. Buff body, medium texture, gray glaze, well made. Spur marks inside. H. 2.8, D. го.0, 4.0. II, 23 in drain. 916I

FIGURES 220-231
Scale 2:5


GLAZED BOWLS

## GLAZED JARS, NO HANDLES

232. Buff body, coarse texture, gray glaze on inside and outside of upper portion, well made. H. го.7, D. 9.о, ir.7, 5.0. I, 66. 3796
233. Buff body, medium texture, light blue-green glaze on top and inside, crudely made. H. 8.0, D. 6.6, 9.0, 5.2. I, 26ı sub, II. 4668
234. Buff body, coarse texture. On the upper portion, for one inch down, the glaze is blue-green and the remainder inside and out is a clear gray. This is not an instance of a two-color glaze, but was caused by the fact that the pot was protected by two vessels, one of which was inverted over it, leaving the unprotected glaze to weather gray. Contained coin hoard 3578 . Well made. H. 8.2, D. 5.I, 9.8, 5.0. I, 190 (I-II). 3577. Pl. X, Fig. 3
235. Buff body, fine texture, green glaze, well made. H. 12.2, D. 6.0, if.i. II, 34 sub. 6175
236. Cream body, medium texture, light green glaze possibly formerly dark green, well made. Base of jar covered with ashes. H. 9.6, D. 7.0, i1.0, 6.5. III, 59 below mud floor. 87 I 4
237. Buff body, medium texture, light green glaze, very well made. H. го.5, D. 6.0, го.2, 4.5. II, i59 sub. 10866
238. Cream body, medium texture, green glaze, very well made. H. I4.8, D. 8.0, I3.3, 7.2. III, I3O. 9742
239. Buff body, medium texture, dark blue-green glaze inside and out, crudely made. H. 6.5, D. 4.5, 5.8, 4.0 (Baghdad). III, 59. 8427
240. Buff body, medium texture, gray glaze on rim, fairly well made. H. I5.6, D. 6.2, 14.1, 6.4. II, II2 (II-III). 3975

## FIGURES 232-240

SCALE 2:5


GLAZED JARS, NO HANDLES

## GLAZED JARS, NO HANDLES

241. Buff body, medium texture, gray glaze inside and out, well made H. 6.0, D. 5.3, 7.4, 4.I (Baghdad). III, 42. 7234
242. Cream body, medium (?) texture, remains of sandy glaze now white, fairly well made. H. 9.0, D. 4.2, 6.6, 3.2. Trial trench 30, surface. 3579
243. Buff body, medium texture, gray glaze formerly green, very well made. Spur marks on top and bottom (?). H. 8.5, D. 5.2, 8.7, 5.8. II, I 73 sub (II-III). 7237. Pl. IX, Fig. 4
244. Body not visible, sandy gray glaze crudely applied, well made. H. 7.6, D. 4.5, 8.I, 4.5. III, io sub. 7635
245. Cream body, medium sandy texture, white glaze badly decomposed, crazed, and flaking, well made. H. 8.9, D. 5.5, го.6, 6.3. II, 260 sub (II-III). 6890
246. Buff body, coarse (?) texture, neck and inside iridescent glaze probably formerly dark green, fairly well made. H. 17.5, D. 9.5, I5.3, 7.4. I, 105.3603
247. Buff body, medium texture, gray glaze inside and on rim, fairly well made. H. 28.6, D. іо.5, 24.5, i2.0. II, í2. 4289
248. Cream body, coarse texture, green glaze inside only, well made. H. 19.6, D. 14.2, 23.0. II, 70. 5059
249. Buff body, coarse texture, green glaze on outside of neck and interior, fairly well made. Rough vertical paring around lower portion with some crude instrument. H. 30.0, D. 1I.5, 23.4, II.5. II, I35 sub. 9044
250. Dark gray body possibly due to overfiring, coarse texture, dark green glaze on rim and inside, well made. H. 36.0, D. 16.2, 37.0, 18.8. I, 33, II. 3986

FIGURES 241-250


GLAZED JARS, NO HANDLES
251. Buff body, medium texture, gray glaze, well made. H. 6.5, D. $5.5,7.5$. In well in II, 65 (II?). 11475
252. Cream body, medium texture, green glaze, well made. H. 8.0, D. 5.2, 6.2, 5.5. In well in I, 236. 11175
253. Cream body, medium texture, gray glaze, fairly well made. H. 7.5, D. 4.0, 5.5, 3.7. III, 35. 7370
254. Cream body, medium texture, sandy gray glaze misfired, fairly well made. Pouring lip. H. 12.0, D. 7.5, II.0, 7.0. III, I6 sub, IV. 7798
255. Cream body, medium texture, sandy gray glaze, fairly well made. Pouring lip. H. 9.5, D. ?, 9.0, 3.8. II, 177 sub. 7207
256. Cream body, medium texture, light green glaze inside and out, crazed and flaking very badly, large runs on bottom, well made. H. if.5, D. 6.5, го.5, 9.5. I, 33 (II). 3983
257. Cream body, coarse texture, light green glaze crazed and flaking, badly decomposed, well made. H. 14.4, D. 2.8, 5.5, 5.0. I, 200 (I-II). 4062
258. Cream body, coarse texture, green glaze, fairly well made. H. 8.8, D. 3.4, 6.I, 3.5. In well in I, 263. inif4
259. Cream body, medium texture, green glaze, very well made. H. ı6.2, D. 5.2, if.0, 6.6. I, 61. 4670. Cf. J. P. Peters, Nippur, II, Pl. VIII, Fig. 8.
260. Cream body, medium texture, green glaze, very well made. H. 14.3, D. 3.8, 9.5, 5.7. II, 93.5056.
261. Cream body, medium texture, dark blue-green glaze, which extends three centimeters inside neck, lower portion and base unglazed, well made. H. ェ6.0, D. 3.0, 9.6, 5.5 (Baghdad). II, II3. 4123

FIGURES 251-261

## Scale 2:5



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GLAZED JUGS, ONE HANDLE

## GLAZED JUGS, ONE HANDLE

262. Cream body, medium texture, green glaze faded, well made. H. 8.6, D. 4.3, 8.2, 4.5. II, II2. 4044
263. Buff (?) body, medium texture, dark green glaze inside and out, well made. H. 8.7, D. 6.0, 8.5, 4.6 (Baghdad). II, ıı2. 398r. See Pl. XIII, Fig. 3, for similar example.
264. Cream body, medium texture, gray glaze, very well made. H. 6.4, D. 3.8, 5.7, 3.5. II, 93.6173
265. Cream body, fine texture, green glaze, well made. H. 6.7, D. 3.0, 5.6, 2.8. II, 97 floor. 5140
266. Buff body, coarse texture, green glaze badly flaking, well made. H. 9.0, D. 3.6, 6.6, 4.6. II, 72. 5287
267. Cream body, medium texture, gray sandy glaze formerly green crazed, very well made. H. 8.4, D. 3.6, 6.2, 3.6. Street 227 below II (III). 6100
268. Buff body, coarse texture, light blue-gray glaze inside and out decomposed and cracking off body, well made. H. 9.0, D. 2.5, $6.5,3.5$. I, 193. 3618
269. Cream body, medium (?) texture, green glaze heavy run at base of jug, well made. H. in.0, D. 3.5, 8.0, 5.6. II, 65 (I). 4741
270. Cream body, medium texture, sandy light gray glaze, fairly well made. H. i2.0, D. 2.3, 6.0, 4.3. I, 68 sub (II). 48i3
27I. Cream body, medium texture, light blue glaze, well made. H. го.4, D. 4.0, 2.5, 7.5. I, 43.477 I
271. Buff (?) body (overfired), medium texture, gray glaze crazed, fairly well made. H. io.8, D. 3.0, 5.5, 3.5. I, 259, II? 4269

## Scale 1:2



GLAZED JUGS, ONE HANDLE

## GLAZED JUGS, ONE HANDLE

273. Cream body, medium texture, light gray glaze inside and out originally green, fairly well made. H. 7.I, D. 3.I, 4.9, 2.8 . Trial trench 3I, I meter (I?). 6853
274. Buff body, medium texture, sandy gray glaze badly flaking, well made. H. 12.2, D. 4.3, 7.0, 6.5. In well in I, 236. 11038
275. Cream body, fine (?) texture, green glaze crazed, well made. H. I4.0, D. 4.5, ıо.0, 5.2. III, 24. 6404
276. Buff body, medium texture, green glaze crazed, very well made. Pouring lip. H. г6.8, D. 4.2, iл.2, 7.3. III, 6 floor. 6852. Pl. IV, Fig. i. Cf. example from Dura-Europos in the Syrian National Museum, Damascus.
277. Buff body, medium texture, green glaze faded, very well made. H. 20.0, D. 5.0, 13.5, 6.5. III, I9I. IO869
278. Cream body, medium texture, green glaze inside and out, well made. Spur marks on top. Twisted rope handle. H. ig.6, D. it.o, i7.5, 8.5. III, IOI sub. 898i
279. Buff body, medium texture, dark green glaze, fairly well made. H. ı8.0, D. 6.0, I3.0, 8.0 (Baghdad). I, 250 (I-III). 42 I9
280. Buff body, medium texture, blue-green glaze which has run and scaled badly, well made. H. 28.6, D. 8.5, i5.6. I, surface débris (I-II). 3622 A
28i. Cream body, medium texture, green glaze finely crazed, well made. H. 34.2, D. 7.7, i9.0. II, 37. 43II

FIGURES 273-281

## Scale as marked



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GLAZED JUGS, ONE HANDLE
282. Buff body, fine texture, gray green glaze, well made. H. 22.5, D. if.I, I7.I, 6.2. Pottery pit, No. 4, 5 meters (II?). 6292
283. Cream body, medium texture, green glaze, very well made. H. 24.7, D. in.o, i8.0, 9.6. III, 31. 7irg. Cf. De Morgan, Dél. en Perse, Mém. I, 125, Fig. 285.
284. Cream body, medium texture, green glaze, fairly well made. H. ı9.0, D.6.8, із.0, 7.5. I, 38 (I-II?). 4278. This type is somewhat similar to a common type found at Nippur, examples of which are now on exhibition at the Museum of the University of Pennsylvania, Philadelphia.
285. Body not visible, light tan glaze possibly once dark green, extends to inside of neck, well made. H. 21.0, D. 6.6, I3.5, 6.2. I, 33. 3982. For decoration see sketch I, Pl. A.
286. Cream body, coarse texture, white glaze possibly formerly dark green, fairly well made. Spur marks on top and bottom. H. 32.0, D. 8.I, 14.0, ı..0. I, I48. 3808. Pl. I
287. Buff body, medium texture, dark (?) green glaze crazed and flaking, fairly well made. H. 21.0, D. 4.5, 14.5, 7.I. II, 89. 4835. Cf. De Morgan, Dél. en Perse, Mém. I, 59, Fig. 14, yellow body, green glaze with similar decoration.
288. Cream body, medium texture, blue-green glaze flaking badly, fairly well made. H. 20.6, D. 7.5, 14.2, 7.0. II, I2I floor. 5200. Cf. De Morgan, op. cit., p. 59, Fig. 12, gray body, white glaze.
289. Buff body, medium texture, light green glaze probably originally dark green. Inside of neck glazed. Glaze crazed and flaking. Fairly well made. H. I4.2, D. 4.2, 9.8, 4.8. I, 94. 3725. Cf. J. P. Peters, Nippur, II, Pl. VII, Fig. 2. Photographs of Nos. 4045 and 4640 of this type, Pl. III, Figs. I-2. For decoration see sketches 2 and 3, Pl. A.
290. Cream body, medium texture, light gray sandy glaze decomposed, well made. H. 14.5, D. 2.5, 7.0, 4.2. I, 209. 3971


## GLAZED JUGS, TWO HANDLES

291. Buff body, coarse texture, sandy green glaze, well made. Н. т2.0, D. 8.3, го.8, 5.5. III, 34. 7200
292. Cream body, medium texture, dark green glaze inside and out with thick over glaze of blue-green on upper neck, well made. H. i5.0, D. 7.5, iт.6, 6.i. I, 99, II. 4068
293. Cream body, medium texture, gray glaze probably formerly green flaking, crudely made. Spot on side where jug rested against kiln wall or support. H. го.8, D. 3.2, 7.6, 4.8. II, ${ }_{176}$ just below floor. 6895. Cf. J. P. Peters, Nippur, II, Pl. VII, Fig. i.
294. Buff body, coarse texture, green glaze, crudely made. H. g.o, D. 4.0, 6.8, 3.2. II, 90. 6499. Cf. F. Cumont, Fouilles de Doura-Europos, p. 466 and Pl. CXIX, Fig. 6
295. Buff body, medium (?) texture, light gray sandy glaze flaking badly, fairly well made. H. 8.5, D. 3.5, 7.7, 4.8 (Baghdad). Block D (I). 36ro. Pl. X, Fig. r. Cf. Peters, op. cit., Pl. VII, Fig. 4 ; also example from Dura-Europos in the Syrian National Museum, Damascus.
296. Cream body, coarse texture, gray glaze, well made. H. 6.5 (?), D. ?, 7.4, 4.3 (Baghdad). III, 54. 8332
297. Cream body, medium texture, gray glaze formerly green, fairly well made. H. 9.5, D. 3.0, io.0, 6.6. II, i64 sub. 6599. Pl. X, Fig. 4. These peculiar flat bosses are uncommon at Seleucia, and this example, with the exception of a fragment from a pottery pit, was the only one recovered. Their origin is difficult to determine. They are found upon examples of late Parthian pottery and upon certain Sasanian vessels. The two small conical bosses, one on either side of the base of the handle, have predecessors that go far back into Sumerian times, and possibly may have been originally connected with representations of the Mother Goddess. See text, p. 26, note i.

SCALE AS MARKED


GLAZED JUGS TWO HANDLES

## GLAZED PILGRIM FLASKS, TWO HANDLES

298. Cream body, medium texture, green glaze crazed, fairly well made. H. i2.0, D. 3.5, 9.2 (Baghdad). II, I53. 6059
299. Buff body, coarse texture, gray glaze, well made. H. i6.2, D. 2.0, I3.2. II, 249 sub, III. 7121
300. Cream body, medium texture, gray glaze, well made. Large spur marks on side. H. I3.8, D.2.1, 10.5. III, I2. 7244. Cf. De Morgan, Dél. en Perse, Mém. I, 60, Fig. 23, yellow body, blue glaze; also R. Campbell Thompson, "Temple of Nabû at Nineveh," Archaeologia LXXIX (i929), Pl. LIV, Nos. 188 and I89. (The latter does not seem Parthian to me.)
301. Cream body, medium texture, crudely made. H. I4.0, D. 3.5, I3.5 (Baghdad). III, 34. 7665. This flask was found in the same room as a kiln in which it had either been made or was about to be glazed. See Fig. 8, page 104.
302. Cream body, medium texture, gray glaze, fairly well made. H. unobtainable, restored, D. 18.o. III, 32. 7198
303. Cream body, medium texture, white glaze, well made. Spur marks on either side. H. 18.5, D. 4.7, 14.4. I, I99, II (IIIII). 4058. Photograph of flask under this type, Pl. V, Fig i.
304. Buff body, coarse texture, gray glaze, well made. H. 33.2, D. 7.0, 24.5. III, í6 sub. 9565. See Fig. 4, p. i9.


GLAZED PILGRIM FLASKS, TWO HANDLES

## GLAZED PILGRIM FLASKS, TWO HANDLES

305. Cream body, coarse texture, gray glaze, very well made. Spur marks on both sides. H. 29.0, D. 23.5 (Baghdad). III, 49. 11993
306. Buff body, coarse texture, crudely made. H. 18.5, D. 16.3. III, 34. 7664. Cf. No. 30I, which was also found in this kiln room, where it had either been made or was about to be glazed. See photograph of kiln, Fig. 8.


Fig. 8. Pottery kiln

307. Miniature pot. - Buff body, fine (?) texture, very well made. H. 5.4, D. 3.2, 6.0. I, 192 (I-II). 5000. Pl. XII, Fig. 4 (left). Cf. No. ${ }_{17} 8$.
308. Miniature pot. - Buff body, medium texture, light brown glaze inside, well made. H. 4.2, D. 3.5, 5.4. I, 261 sub, II. 4432. Pl. XII, Fig. 4 (right)
309. Miniature pot. - Buff body, medium (?) texture, thin partial coat of gray glaze, well made. H. 4.0, D. 3.6, 5.6, 4.0 (Baghdad). I, Street 36. 5688
310. Miniature pot. - Buff body, medium (?) texture, gray glaze on upper portion and inside, well made. H. 5.0, D. 2.8, 5.7, 3.0 (Baghdad). I, 26I sub, II. 4434

3II. Miniature jug. - Buff body, fine texture, gray glaze possibly originally green, glaze very heavy and has run badly toward bottom, fairly well made. H.6.0, D. 2.5, 4.0 (Baghdad). I, 26 I sub, II. 4538. Cf. No. 27 I.
312. Miniature jug. - Buff body, fine (?) texture, very well made. H. 4.I, D. i.8, 3.8, 2.6 (Baghdad). III, 4. 6600
313. Miniature jug. - Brown body, outside blackish due to firing, fine texture, fairly well made, probably in two-piece mold. H. 4.5, D. 1.7, 3.2, 2.0 (Baghdad). I, 259. 4238
314. Miniature jug. - Buff body, fine texture, fairly well made. Pouring lip. H. 5.8, D. 3.0, 3.2, ז.8. I, 259. 4239. Cf. No. 137.
315. Miniature pilgrim flask. - Dark gray body (overfired), medium texture, well made in two-piece mold. Possibly a brown glaze on outside. H. 5.8, D. 4.6, thickness 2.5. II, 227 sub. 8592. Cf. Nos. 298-306. See Fig. 4, p. ig.
316. Miniature jug. - Red body, very fine texture, red wash, very well made but much worn with use. Provenance unknown. H. 6.2, D. т.9 (?), 3.2, 2.2. iा66


## MISCELLANEOUS

317. Cosmetic dish. - Reddish buff body, fine texture, crudely made by hand. H. o.9, D. 2.0. II, 58 sub, III. 6993
318. Cosmetic dish or small pot cover. - Cream body, fine (?) texture, well made. H. r.i, D. 3.7, 3.8 (Baghdad). I, 209. 3664
319. Miniature pot or ointment pot. - Buff body, medium texture, gray glaze inside and out, well made. H.3.2, D. 5.0, 5.8. II, II 2. 3972
320. Cosmetic or possibly incense container. - Cream body, medium (?) texture, gray glaze, well made. H. 4.6, D. 3.6, 5.5, 3.4 (Baghdad). II, 232 in mud brickwork. 6000
32I. Small pot, possibly for cosmetics. - Cream body, medium texture, gray glaze crazed, crudely made. Rim chipped before glazing. H. 5.2, D. 4.1, 6.4, 4.2. II, débris (II). 5716
321. Cosmetic pot. - Reddish buff body, fine texture, crudely made. Molded in two parts. Skeuomorphic? H. 4.0, D.3.6, 5.6. II, 224. 5840
322. Round cosmetic pot. - Reddish buff body, fine texture, fairly well made. H. 5.8, D. 5.0, 6.3. II, 42. 6734
323. Goblet. - Buff body, fine texture, fairly well made. H. 5.9, D. 3.4, 2.7, 3.0. Surface. 6408
324. Miniature bowl, possibly for cosmetics. - Buff body, medium texture, blue-green glaze, very well made. H. 2.8, D. 5.7, 3.8. II, vault 159. $^{\text {5I2 }} 2$
325. Miniature jar. - Cream body, medium texture, gray glaze inside and upper part of outside, fairly well made. H. 3.2, D. 5.5, 6.2, 4.I (Baghdad). I, 237. 3679
326. Miniature jar, possibly for cosmetics. - Cream body, coarse texture, green glaze flaking, fairly well made. H. 4.5, D. 4.2, 7.7, 4.8. III, 200. 10933
327. Vase. - Buff body, fine texture, fairly well made. H. 5.I, D. i.8, 3.I, 2.4 (Baghdad). I, 26i sub, II. 4429. Cf. Frederick J. Bliss and R. A. S. Macalister, Excavations in Palestine, p. I26, and Pl. 60, 6, for a similar shape, but a different ware. This piece is probably not an importation from Palestine.
328. Jar. - Cream body, medium texture, light green glaze crazed, well made. Glaze does not reach the base of the vessel, and the unglazed portion has been covered with bitumen. Contained coin hoard, 3575. H. 9.I, D. 4.3, 6.0, 3.5. I, 190, II. 3574. Pl. X, Fig. 2

## SCALE AS MARKED



MISCELLANEOUS

## MISCELLANEOUS

330. Small jar. - Buff body, medium texture, green glaze, well made. Spur marks outside. H. 4.0, D., top without projections 5.6, with projections 6.2 , base 3.5 . III, 118 . 9244
331. Jar stand. - Cream body, fine texture, fairly well made. H. 5.2, greatest diameter 5.3 , least diameter 3.0. I, débris. 922
332. Jug. - Buff body, medium texture, brown or yellowish glaze on outside, fairly well made. H. io.2, D. 5.0, 6.5, 4.5. II, 39 floor. 5843. This vessel may have been formed on the wheel and then the design applied and the whole reworked by hand, or it may be entirely hand-made. The figure seems to be that of a female and is probably intended to be human. The object held in the hand (?) is indistinguishable, owing both to the glaze and to the coarseness of the workmanship. Pl. XI, Figs. ${ }^{-2}$
333. Drinking jug. - Buff body, fine texture, well made. Spouted, with handle on right side. H. 5.7 , D. 5.0, $7.2,4.0$. II, 93. 6700 . Drinking jugs with this type of spout are no longer in use in Mesopotamia, although common in Syria. Cf. Nos. 75 and 76. Pl. IX, Fig. I
334. Jar stand. - Buff body (overfired), medium texture, well made. H. 2.6, D. 9.5 (Baghdad). II, II2. 3973
335. Askos. - Buff body, fine texture, well made in two-piece mold. H. 7.9, base, 4.4. II, 92. 5050. This is one of the few definitely Greek shapes found at Seleucia. Pl. IX, Fig. 2. See text, p. 2I, and Fig. 6.

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## MISCELLANEOUS

336. Jar stand. - Buff body, medium texture, well made. H. 3.3, inner diameter ro.o, outer diameter i6.0. II, 30. 4398
337. Pot. - Buff body (underfired), medium texture, crudely made. H. 6.5, D. 4.0, including handle 7.0 , i.8. III, 86. 882 I. This pot either had a solid handle or was part of a double vase. If the latter alternative is true, this would be an interesting survival of a much earlier form.
338. Bank. - Buff body, medium texture, fairly well made. H. 8.7, D. i.o, 7.5 , 3.0. III, 45. 7533. For discussion of this and the following banks numbered $339,340,34 \mathrm{I}$, see the text, p. i8.
339. Bank. - Buff body, medium texture, fairly well made. H. ir.5, D. i.5, 8.2, 3.2 (Baghdad). II, it 2.4270 . Pl. IX, Fig. 3 of 6540 , which is an example typed under bank 339.
340. Bank. - Cream body, medium (?) texture, fairly well made. Н. т2.5, D. т.о, го.о, 3.7. II, 259. 7532
341. Bank. - Buff body, medium texture, well made. H. i2.3. D. I.2, II.0, 4.4 (Baghdad). III, Street 32 opposite II, 237 , 8080
342. Ointment pot or incense vessel? - Buff body, coarse texture, fairly well made. H. 7.4, D. 4.8, 7.3, 5.8. III, 74. 8669
343. Pot. - Cream body, medium texture, sandy gray glaze, very well made. H. I4.3, D. 4.0, 12.5, 7.0 (Baghdad). III, i6 sub, IV. 740I. See text, pp. 19-20, for a discussion of this important piece. Its use is problematical, but the most logical suggestion thus far put forward is that it was for softening bitumen to receive seal impressions, a large number of which were found amid the remains of a chest (?) near by.

Scale 2:5


MISCELLANEOUS

## MISCELLANEOUS

344. Charcoal burner? - Greenish buff body, coarse texture, well made. H. 6.6, D. 40.0, 34.0. III, 6 floor. 6740. Cf. No. i3. This more elaborate vessel may possibly have found other uses than that of holding burning charcoal for warming a room or heating food. If it was used as a charcoal burner, the decoration on the bottom would not have been visible, but neither are the beautiful engraved figures which cover the bases of the more modern Persian metal vessels which serve various utilitarian purposes.
345. Jug. - Reddish body, fine texture, red wash vertically burnished, very well made. H. 22.4, D.?, 16.8, 10.3. I, 199, II. 4072. Possibly an imported ware. If so, the eastern part of the Parthian Empire would be the most logical place in which to seek its origin. Sherds of a somewhat similar ware have already been brought back from Seistan. This ware is not similar to the smooth-finished, well-made red ware from Dura-Europos. See text, pp. 21-22. It is identical with that of bottle 73 , Pl. VIII, Fig. 3 .
346. Cooking pot. - Buff body, coarse texture, green glaze on rim and inside, fairly well made. H. 26.0, D. 18.0, 35.0. II, 163 (II-III). 5928
347. Cooking pot. - Buff body, coarse texture, light green glaze on rim and inside, fairly well made. H. 22.6, D. 16.9, 20.0. I, 97, Burial 65 (I-II). 4074. Lower exterior much smoked. Note rim designed to hold pot cover. Cf. No. 348. Pl. V, Fig. 2.
348. Cooking pot. - Buff body, medium texture, green glaze on rim and inside, fairly well made. H. 14.5, D. 19.0, 20.5. II, 98 sub (only one example). 660I. Rim designed to hold pot cover.
349. Dish. - Red body, very fine texture, Arretine ware. H. I2.2, greatest diameter 35.2, diameter of base 10.2. Provenance unknown. 1852. This is an imported ware.

Scale 1:5


MISCELLANEOUS

## MISCELLANEOUS

350. Pottery object. - Cream body, coarse texture, well made. H. i3.I, length 30.7 , width 12.8 . III, 6 about floor. 6823. The handle, which was broken off, has been conjecturally restored from the stubs which remain. The front has small legs which raise it off the floor. There is a frame around the open end which makes the actual opening smaller than the interior. In front and at the bottom of this frame is a small trough. Compare the small projection in the center of the back end with the larger one in No. 351, where there is a hole through this projection. One tenable suggestion is that the object is a charcoal heater. The small legs would prevent the hot body from coming in contact with the floor coverings, and the frame and small trough would hold and catch the ashes, and the handle could be used to carry the whole about. See discussion under No. 35I, and the text, pp. 20-21.
351. Pottery object. - Buff body, medium texture, fairly well made. H. 17.0, length 36.0 , width 13.0 . III, 125 . 9749. This vessel appears to have been used for a purpose similar to that of No. 350, which, however, differs somewhat in construction. Again a broken handle has been restored and again small legs appear. The front was closed by a sliding door inserted from the top. Such a door would probably be made of clay, and indeed flat pieces of baked clay which fit the opening have been found on the excavation. The projection in the rear of this object is pierced by a small hole. If this were used as a charcoal heater, such a hole might furnish air for combustion which in No. 350 entered through the open door, while the sliding door would prevent ashes from scattering in the wind. Another suggestion has been made by Mr. Yeivin, of the staff, that the vessel was used as a sort of lantern. A lighted lamp may have been placed within the long cylinder, and the flame thus protected from the wind would have lighted the path of the bearer who would carry the whole contrivance by the handle. The sliding door might have been used to cut off the light when it was not desired, much in the manner of a modern dark lantern.
352. "Hib." - Buff body, coarse texture, well made. H. 94.0, long diameter 140.0, short diameter 84.0. III, ili. if888. This large vessel was probably used much as the present vessels of the same type in Mesopotamia today, for water and other storage purposes. See text, p. ig.
353. Jug. - Buff body, medium texture, brown manganese glaze, well made. H. г6.0 (?), D. ?, iт.7, 6.4. I, го5. 3733. See glaze analysis B, p. 33. Pl. VII, Fig. 2

$1: 5$


1:5


MISCELLANEOUS


## UNGLAZED LAMPS

354. Buff body, fine texture, fairly well made. H. 2.5, L. 6.o. I, I 53 débris (II-III). 3761
355. Cream body, fine (?) texture, crudely made. H. 2.9, L. $5 \cdot 5$. II, Street 36 (II-III). 468r. See text, p. 26, for discussion of this type.
356. Buff body, medium texture, fairly well made. H. 2.6, L. 6.4. II sub débris (II-III). 6797
357. Cream body, medium (?) texture, fairly well made. H. 2.5, L. 5.9. III, I3 (II-III). 7319
358. Buff body, fine texture, well made. H. 2.6, L. 7.3. II, 64 (I-III). 6178
359. Buff body, medium texture, crudely made by hand. H. 2.8, L. 7.5. II, 38 floor (one example only). 5597. See text, p. 26.
360. Buff body, fine (?) texture, well made. H. 2.8, L. 9.0 (Baghdad). I, 250 (II-III). 388I
361. Reddish buff body, fine (?) texture, well made. H. 3.3, L. 9.I (Baghdad). I, 194 in mud brickwork (II-III). 5369
362. Reddish buff body, fine texture, fairly well made. H. 3.1, L. 7.I (?). II, 34 (III). 6048
363. Reddish buff body, fine texture, well made. H. 3.2, L. 7.3. Surface. 66II
364. Reddish buff body, fine (?) texture, fairly well made. Badly smoked around burner and top. H. 4.9, L. 12.2. I, I69. 3685
365. Reddish buff body, medium texture, crudely made. H. 4.0, L. 7.4. II, 74 possibly III (III). 5415
366. Buff body, medium (?) texture, well made. H. 3.5, L. i4.3. I, 209 near floor. 3913. Pl. XII, Fig. 3
367. Cream body, medium texture, crudely made. H. 4.I, L. if.2. II, 125 floor. 5235

Scale 1:2


356


UNGLAZED LAMPS
368. Buff body, fine texture, well made. H. 3.3, L. 8.4. II, 75. 5335. Pl. XIII, Fig. I (left)
369. Cream body, fine texture, well made, molded horizontally. H. 2.0, L. 8.8 (Baghdad). II, 137. 6886. Cf. Bliss and Macalister, Excavations, Pl. 62, 6, which is similar in shape but not in decoration.
370. Reddish body with fine red slip, fine texture, fairly well made. H. 5.5, L. ? (Baghdad). Street 32 (?). 4765
371. Cream body, medium texture, crudely made by hand. H. 7.4, L. ? (Baghdad). Surface. 5933
372. Cream body, fine texture, well made. Decorative design on base. H. 2.4, L. 7.0. III, 39. 7439
373. Buff body, medium texture, fairly well made. H. 2.6, L. 6.6 (?). III, 6. 7065
374. Buff body, fine texture, fairly well made. H. 3.0, L. 8.o. II, II4 floor (I-III). 5370. Pl. XIII, Fig. I (right)
375. Cream body, medium texture, fairly well made. H. 3.3, L. 9.0. II, i76 in mud brickwork. 6II5
376. Buff body, medium (?) texture, crudely made in a mold. H. 2.8, L. 7.7. II, II5 in mud brickwork. 9708
377. Cream body, fine (?) texture, fairly well made. H. 3.o, L. 7.8. III, Street 32. 9284
378. Buff body, fine texture, well made. Molded longitudinally. H. 3.0, L. 7.4. II, 62 in mud brickwork (III ?). 7598
379. Cream body, medium (?) texture, crudely made. Molded longitudinally. H. 2.9, L. 7.6. III, 46. 8ı77
380. Cream body, fine texture, well made. Molded longitudinally. H. 2.4, L. 7.5. III, 4. 7357

## FIGURES 368-380


381. Buff body, medium texture, very well made in mold. Upper part of nozzle painted or covered with a red wash. H. 4.0, L. I3.5 (?). III, 22 sub. 7632
382. Cream body, medium (?) texture, fairly well made in two-piece mold. H. 4.3, L. if.5. III, 231 near vault 151. 11848. Seven burners, five in front and one on each side. Floral decoration on bottom. Largely Hellenistic in influence both in the woman's figure and in the two soldiers.
383. Buff body, medium sandy texture, fairly well made. H. 5.6, L. 14.3. II, I73 sub. 7531
384. Cream body, medium texture, fairly well made. H. 4.7, L. 9.7. II, Street io (II-III). 5266
385. Red body, coarse texture, crudely made. Very heavy. H. 4.9, L. if.o. II, 96 sub. 6538. See text, p. 27.
386. Buff body, medium (?) texture, very well made. H. 3.0, L. 9.4 (Baghdad). III, 39 sub, IV. 7754
387. Red body, fine texture, possibly covered with a red wash, well made. H. 2.7, L. ro.o. I, 26I sub, II. 4428. This lamp seems to be entirely Hellenistic in inspiration. Both from this fact and from the clay and manufacture, it would seem an importation. Pl. XII, Fig. 2

Scale 1:2



ONE HALF-BOTTOM


UNGLAZED LAMPS

## GLAZED LAMPS

388. Buff body, medium texture, gray glaze, fairly well made. H. 2.5, L. 7.2. II, 269 (I-III). 6363
389. Buff body, medium texture, gray glaze, well made. H. 3.2, L. 7.2. II, 67 (I-III). 6562
390. Buff body, fine texture, gray glaze, fairly well made. H. 3.r, L. 8.8. II, 197 (I-III). 5654
391. Buff body, fine texture, gray glaze, well made. H. 3.5, L. 6.9. II, 62 (I-III). 6416
392. Cream body, medium texture, green glaze, fairly well made. H. 6.2, L. i6.o. Débris. Street 32 (II-III). 6057. Note scale I:5.
393. Buff body, medium texture, white glaze possibly formerly green, well made. H. 4.7, L. 1о.2. II, iI3 (II-III). 4050
394. Buff body, fine (?) texture, gray glaze, well made. H. 3.3, L. 9.4. I, 253 (I-IV). 4217
395. Buff body, fine texture, dark gray glaze, well made. H. 3.4, L. 9.7. I, 73 from a pot. 4468
396. Body and texture not visible, green glaze, well made. H. 4.2, L. 9.9. II, 64 sub (II-III). 6225
397. Cream body, fine texture, light gray glaze, well made. H. 3.8, L. I2.4 (Baghdad). II, I33 sub (II-III). 6462
398. Cream body, fine (?) texture, gray glaze crazed, well made. H. 4.7, L. I3.I. I, 75. 4320
399. Buff body, fine texture, gray glaze on reservoir, green on nozzle, well made. H. 4.5, L. 10.7. II, 773 (II-III). 6224. See text, p. 26.
400. Buff body, medium texture, green glaze, well made. H. 4.6, L. 12.2. II, Street 227 opposite II, 175 (II-III). 5961

Scale 1:2


GLAZED LAMPS

## GLAZED LAMPS

40I. Body and texture not visible, light gray glaze, fairly well made. H. 4.8, L. I3.2 (Baghdad). II, Street 36 (II-III). 5820
402. Buff body, medium texture, sandy gray glaze, fairly well made. H. 5.6, L. 12.5 (Baghdad). I, I5I sub, II (II-III). 5488
403. Cream body, medium texture, possibly disintegrated yellow glaze, well made. H. 4.9, L. ? I, 226, II (III). 4477
404. Cream body, medium (?) texture, sandy green glaze, crudely made. H. 5•7, L. I4.o. II, II7. 519I
405. Buff body, medium texture, green glaze finely crazed, fairly well made. H. 5.6, L. i2.8. II, 73 sub (II-III). 6724
406. Buff body, coarse texture, gray glaze, well made. H. 6.4, L. ? Level uncertain. IO6I5
407. Buff body, coarse texture, gray glaze with bubbles, well made. H. 2.2, L. 10.2 (?) (Baghdad). III, I2. 7575
408. Buff body, fine (?) texture, brown (?) glaze, well made. H. 2.2, L. Io.6. III, 35. 8289
409. Buff body, medium texture, gray glaze, crudely made. H. 3.7, L. 8.5. III, 126.985 I
410. Cream body, medium (?) texture, gray glaze, well made. H. 2.9, L. 10.7. II, 53 sub. 6113

4II. Buff body, medium (?) texture, sandy gray glaze, well made. H. 6.0, L. 16.5. II, i74 sub, III. 7624


GLAZED LAMPS


## GLAZED LAMPS

4I 2. Cream body, fine texture, gray glaze, very well made. H. 2.9, L. ir.4. II, 96 floor. 4974. Pl. XIII, Fig. 2 (right)

4I3. Cream body, fine texture, gray-green glaze, very well made. H. 2.5, L. ir.3. I, 38. 4325. Pl. XIII, Fig. 2 (left)
414. Cream body, medium texture, green glaze badly decomposed, fairly well made. H. 5.5, L. i4.2. Surface. 5416
415. Cream body, medium (?) texture, green glaze badly flaking, well made. H. 4.I, L. i2.I (Baghdad). I, 38. 4274. See H. V. Hilprecht, Explorations, Pl. facing p. 326, for Parthian lamp of similar shape.
416. Cream body, medium texture, green glaze, fairly well made. H. 3.6, L. ir. 3 (?). III, Street 36.5980
417. Cream body, medium texture, dark green glaze, very well made. H. 5.4, L. 14.3. II, 227. 5850. Pl. XII, Fig. i. See text, p. 26.

Scale 1:2


GLAZED LAMPS

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Type no. 286
PLATE II







Fig. i. Type no. igi


Fig. 2. Type no. 195
Fig. I. An example under type no. 182
PLATE VII





Fig. 2. Type no. 175


Fig. i. Type no. 74
?
PLATE IX

Fig. 2. Type no. 335

Fig. 4. Type no. 243

Fig. 3. An example under type no. 339



Fig. 2

줄
PLATE
Type no.


Fig. I
?

PLATE XII


Fig. 2. Type no. 387



Type no. 368 Fig. i Type no. 374


Type no. 413
FIG. 2
Type no. 412


FIG. 3. Type no. 263
PLATE XIV
\&
?

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[^0]:    ${ }^{1}$ Robert Koldewey, The Excavations at Babylon, pp. 215 ff ., et passim; Oscar Reuther, "Die Innenstadt von Babylon," WVDOG, XLVII, 1926.
    ${ }^{2}$ Délégation en Perse, Mémoires, ed. J. de Morgan, I, 59 ; it is difficult to determine whether any given material is Parthian or, if it is, to what Parthian level it belongs.
    ${ }^{3}$ W. Andrae, "Die Partherstadt Ashur," WVDOG, LVII, 1933. Examples of types Nos. 141, 306, and 325, were found, but all in graves, which renders them valueless for dating.
    ${ }^{4}$ F. Sarre, Die Keramik von Samarra, pp. 5-7, 25-27.
    ${ }^{5}$ Stephen Langdon, Excavations at Kish, I, 89, 93 ; Pl. XXIX, 2.

[^1]:    ${ }^{1}$ J. H. Breasted, Oriental Forerunners of Byzantine Painting, The University of Chicago Oriental Institute Publications, Vol. I, 1924.
    ${ }^{2}$ Franz Cumont, Fouilles de Doura-Europos (1922-23), 1926.
    ${ }^{3}$ M. I. Rostovtzeff and P. V. C. Baur, eds. The Excavations at Dura-Europos, 1929; idem, The Excavations at Dura-Europos, Second Season, 1928-29, 1931 ; M. I. Rostovtzeff, P. V. C. Baur, and Alfred Bellinger, The Excavations at Dura-Europos, Third Season, 1929-30, 1932.
    ${ }^{4}$ Leroy Waterman, Preliminary Report upon the Excavations at Tel Umar, Iraq, Ann Arbor, 1931, p. v. See also Second Preliminary Report upon the Excavations at Tel Umar, Iraq, Ann Arbor, 1933. These publications will hereafter be referred to as Preliminary Report and Second Preliminary Report.

[^2]:    ${ }^{1}$ Oscar Reuther, "The German Excavations at Ctesiphon," Antiquity, III (1929), 434-451 ; E. Kühnel, Die Ausgrabungen der zweiten Ktesiphon-Expedition, 193I-32, 1933.
    ${ }^{2}$ R. Campbell Thompson and R. W. Hutchinson, "The Excavations on the Temple of Nabû at Nineveh," Archaeologia, LXXIX (1929), 103-148, and plates; idem, "The Site of the Palace of Ashurnasirpal at Nineveh, Excavated in 1929-30 on Behalf of the British Museum," Annals of Archaeology and Anthropology (University of Liverpool), XVIII (1931), iri, and Pls. XXXVI, 21 ; XXXVIII, 2, 4, 5, 12 ; XXXVII (lamps), I, 5, 8 .

[^3]:    ${ }^{1}$ S. Yeivin, "Architectural Notes, Season 1929-30," Preliminary Report, pp. I8-25.
    ${ }^{2}$ See air photograph made shortly before the close of the season 1929-30, in Preliminary Report, Pl. I, facing p. I8.

[^4]:    ${ }^{1}$ The numismatic material from Seleucia is being studied by Dr. Robert McDowell; most of the facts presented here were furnished by him. See also S. Yeivin, "Architectural Notes, Season 1929-30," Preliminary Report, p. 18.
    ${ }^{2}$ Dio. Cass., lxxv, 9; Herodian, iii, 9-10.

[^5]:    ${ }^{1}$ H. Frankfort, Studies in Early Pottery of the Near East, I, 7-8.

[^6]:    ${ }^{1}$ See photograph of kiln, p. 104, Fig. 8. Just to the right of the boy, above and behind the kiln, are a pile of spurs and lumps of clay used as separators.
    ${ }^{2}$ Level III, 34.

[^7]:    ${ }^{1}$ R. H. McDowell, "'Bullae' Stamped with Greek Legends," Preliminary Report, pp. 26-42. These bullae are similar to those found near the vessel in question.

[^8]:    ${ }^{1}$ A somewhat similar arrangement is on exhibition at the museum in Nicosia, Cyprus ; compare also a device from Tepe Gawra, E. A. Speiser, "Preliminary Excavations at Tepe Gawra," Annual of the American Schools of Oriental Research, IX (1927-28), 37-38, and Fig. 80. This may be dated roughly to about 2000 в.c.

[^9]:    ${ }^{1}$ The discovery of somewhat similar wares has been reported in the far eastern part of Persia.
    ${ }^{2}$ A lime plaster was used as a pottery cement at Jerusalem in the Roman period. See R. A. S. Macalister and J. Garrow Duncan, "The Excavations on the Hill of Ophel, Jerusalem, 1923-25," Annual of the Palestine Exploration Fund, IV (1923-25), 194.

[^10]:    ${ }^{1}$ Cf. F. Cumont, Fouilles de Doura-Europos, Pl. CXIX, 6.
    ${ }^{2}$ In both decoration and workmanship this ware resembles later Arab pottery, but numerous examples were found in Level II under three to four meters of undisturbed strata, buried under Level II floors.
    ${ }^{3}$ R. Dougherty, "Miscellaneous Antiquities from Southern Babylonia," Annual of the American Schools of Oriental Research, VIII (1926-27), 49, Fig. 18; R. Koldewey, The Excavations at Babylon, pp. 252-254; E. J. Banks, Bismaya, pp. 270-271 ; J. Jordan, Uruk-Warka, WVDOG, LI, 63 , Pl. 84 f, g; R. Campbell Thompson, "The Temple of Nabû at Nineveh," Archaeologia, LXXIX (1929), i38 and Pl. LV, 209 and 210; C. Hopkins, in The Excavations at Dura-Europos, Second Season, 1928-29, ed. Rostovtzeff and Baur, Pl. XLVIII, i.

[^11]:    ${ }^{1}$ Compare examples in the Museum of the American University, Beirut; The Damascus Museum; Debevoise, "The Pottery of the Parthians," The Bulletin of the Art Institute of Chicago, XXIV (1930), 77-78; F. Sarre and E. Herzfeld, Archäologische Reise im Euphrat- und Tigris-Gebiet, IV, Pl. CXLV, 5; F. Sarre, Die Kunst des alten Persien, p. 149 ; on the example in the Metropolitan Museum of Art, New York, of obvious Roman influence, from Salameyeh, see G. M. A. Richter, "Roman Glazed Pottery," Bulletin of the Metropolitan Museum of Art, XIX (1924), 94-95; on a Sasanian example in the possession of F. Kouchakji of New York the use of the disks is carried to the extreme. Unfortunately, no examples were found at Seleucia ; see the discussion in Cumont, Fouilles de Doura-Europos, pp. 460 ff. and Figs. 62-63.

[^12]:    ${ }^{1}$ From examples and information furnished by the excavator, Professor Edward Chiera.
    ${ }^{2}$ See Clark Hopkins in The Excavations at Dura-Europos, Second Season, 1928-29, p. 39, where the introduction of "faience" is credited to the Parthians.
    ${ }^{3}$ Too much reliance upon the character and color of a glaze has led so expert and experienced a scholar as F. Sarre astray in his identification of a pointed jar with stringhole handles as Parthian ; it is possibly Neo-Babylonian. See F. Sarre and E. Herzfeld, Archäologische Reise in Euphrat- und Tigris-Gebiet, IV, 4, and PI. CXLII, 3.
    ${ }^{4}$ E. Bourry, Treatise on Ceramic Industries, p. 278.

[^13]:    ${ }^{1}$ There is an example of this in the Art Institute, Chicago.

[^14]:    ${ }^{1}$ E. Bourry, Treatise on Ceramic Industries, p. 410 ; F. Sarre, Die Kcramik von Samarra, p. 25.
    ${ }^{2}$ William King, "Chinese Pottery of the Han Dynasty," International Studio, XCIV (Dec., 1929), 35 ; Arthur Upham Pope, An Introduction to Persian Art, p. 65.
    ${ }^{3}$ M. I. Rostovtzeff, Iranians and Greeks in South Russia, pp. 205-206.

