

POTTERY OF ANCIENT EGYPT.¹

By W. M. FLINDERS PETRIE.

On such a familiar subject as pottery, it might be supposed that there would not have been much left to be said, after the various explorers who have studied the antiquities of Egypt. But owing probably to the richness of the more attractive objects, temples, statues, paintings, and jewellery, which abound in that country, the question of the age of pottery has hardly been touched.

There is scarcely any pottery with an assigned date in the British Museum; and the date of one of the examples is certainly in error. Dr. Birch particularly requested that I would take every opportunity of collecting and studying the pottery that I might meet with; and I had excellent opportunities at Gizeh, owing to living continuously there for months together, and walking daily over the ground that the Arabs were excavating. Every piece collected was immediately marked with its locality. The great importance of pottery in historical and other enquiries is manifest to any visitor to Egypt. Large sites of villages are strewn, or rather heaped up, with potsherds. No one who has not wandered over the enormous heaps of broken pottery, could realise the gigantic quantities that accumulated around dwellings in which metal is scarcely used, and where red pot served for all purposes.

Around Cairo the heaps are such that to any one visiting them for the first time, they are more astonishing than anything else in that city; the magnificent Arab architecture, and even the unrivalled museum of Bulak, do not strike the visitor as so completely beyond all experience and reason, as do the rubbish mounds that seem to wall in

¹ Read before the Monthly Meeting of the Institute, February 1st, 1883.

the city on two sides. Yet these heaps, extending about four miles in length, half a mile in breadth, and from about twenty to sixty feet in thickness, are entirely the accumulation of Arab times. Out at old Cairo, the oldest part of all the heaps, which has been entirely deserted for many centuries, the earliest rubbish of all is late Roman; where the heaps are cut through, for quarrying the rock beneath, a band of a few feet thick may be seen, at the bottom, belonging to the latest Roman or the Byzantine period.

The whole amount is probably about equal to a depth of twenty feet over the whole inhabited area of the city; but a remarkable point is that the inhabitants must have continually climbed a mound about fifty feet high to throw away their broken pot, instead of carrying it out to the outer side of the heaps.

Now the process of accumulation that we see so strikingly in the case of Cairo, has been going on in all ages in Egypt; and in every part of the country we meet with sites of towns that are buried beneath their own pottery. At Tehneh, for instance, the mounds of pottery are about one-third a mile across, and twenty to sixty feet high, the whole of the surface of it of Roman date, as far as could be observed. This constant presence of large quantities of pottery, makes it all the more desirable to ascertain as far as possible the age of each class that can be distinguished; as by this guide we may be able to settle the date of various villages and remains that are met with. Yet as far as I know there is no collective description of the varieties of Egyptian pottery, in different periods, to be found in any publication; and it is with the view of giving some general ideas that I have been able to glean, that I venture on the present paper, hoping that it may be of use to any who have opportunities of examining the ancient sites, as well as of interest in the history of pottery.

The three plates accompanying this paper shew the various types of form, from the earliest to late Roman times; each section has its axis, or the central line of the vessel, marked by a broken vertical line; many of the sections are merely of fragments, which, nevertheless, shew the type of lip, neck, or base, of the different forms. The full horizontal lines, joining the axis and the section, shew

the position of the original top or bottom of the vessel. The sections are only given for one half of each form, the symmetrical and opposite half being omitted; this not only diminishes the space, and brings the curves closer together for comparison, but it gives the great advantage that all lines running to the left approach the axis, *i.e.* shew a diminution of diameter, and conversely lines running to the right shew an increase of diameter. Hence the meaning of a slope is always evident, without even seeing where the axis is. Sections like these are of far more value for comparing pottery than perspective drawings, which do not shew the thickness of the vessel, and which modify the curves.

Probably the oldest pieces of pottery that I have found, are two bits from Medum. These I picked up near the tombs of the third dynasty; and as they are more like the pottery of the fourth dynasty than that of any later date, they are probably contemporary with the last king of the third dynasty, Seneferu. The main source of dated pottery of the early period is in the ancient masons' waste heaps around the pyramids of Gizeh. Every scrap obtained from the undisturbed parts of these mounds is certainly of the age of the pyramid builders, Khufu and Khafra, the successors of Seneferu. The most striking feature of this pottery is the fine quality of the better pieces of it; most of it is naturally rough, as it was merely the food vessels and water jars of the lowest class of the population; but among it are pieces almost indistinguishable from fine Roman pottery, and which might readily be mistaken for imitation Samian. The varieties of this earliest pottery may be classified as follows, the dimensions and thickness of the vessels being shewn in the plates one quarter actual size:—

Bright Indian-red, polished surface, red throughout. Form 1, form 2, bowl. Usually wheel made, sometimes hand-made with scraped surface. From Medum and Great Pyramid heaps.

Brown red, varying to light and dark brown; rough surface; black in middle if thick. Form 3 and 4, and large spherical (?) jars, about a foot diameter, generally hand made, and scraped over on surface in all directions. Medum and Pyramid heaps at Gizeh.

Yellow washed over a brown base, rough surface. Form 5, and spherical jars ten inches diam. Both wheel and hand-made. Pyramid heaps at Gizeh.

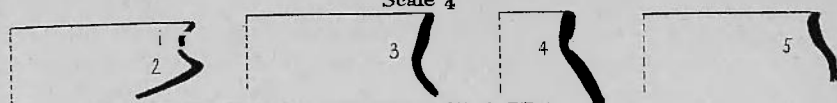
The hand-made pottery is often smoothed *around* in the inside with a slip of wood, and wiped *downwards* on the outside by the hands. I have met with scarcely any other hand-made pottery in Egypt, a few pieces of much coarser quality occurring in Roman times. Certain little vases that have been attributed to the fourth dynasty are probably of Roman period, and will be found described later on.

The next pottery to which any period can be assigned, is some that I obtained out of the mud bricks of the south brick pyramid of Dahshur. Quantities of pieces may be picked up in the ruins of this pyramid, but the pieces selected were each picked out of unbroken bricks, and are hence certainly older than the pyramid. The age of this pyramid is not exactly known; I should say it is most likely of the eighth dynasty, but certainly of the old kingdom. The pottery is of much the same range of quality, as that of the fourth dynasty. The varieties are: Scarlet red, smooth, red throughout, .13 thick
Red-faced brown, smooth. Form 6, bowl with spout; form 7, coarse soft, dark brown, .5 thick.

Of the middle kingdom, of which the twelfth dynasty is the brightest period, I have not obtained any certain pottery. A great deal of blue glazed ware and red pot is lying near the ruins of the labyrinth and pyramid of Amememhat iii; but as the large village of brick there is probably Roman, (by the pottery found in it, and the size of bricks) nothing can be decided about the other stray remains found there, and the blue glazed ware is far more like that of Romano-Greek, than that of Ramesside times.

Of the Empire,—the eighteenth, nineteenth, and twentieth dynasties,—the pottery is very characteristic, more so than that of any period until late Roman times. The great site for obtaining pottery and other remains of certainly the eighteenth dynasty, is at Tel-el-Amarna; the ruins of this town built by the sun worshipper Khuenaten, and only maintained during a few brief reigns after him, are heaped over with broken potsherds; but there are no great mounds betokening a long occupation of the site, and not a fragment of pottery of any other age

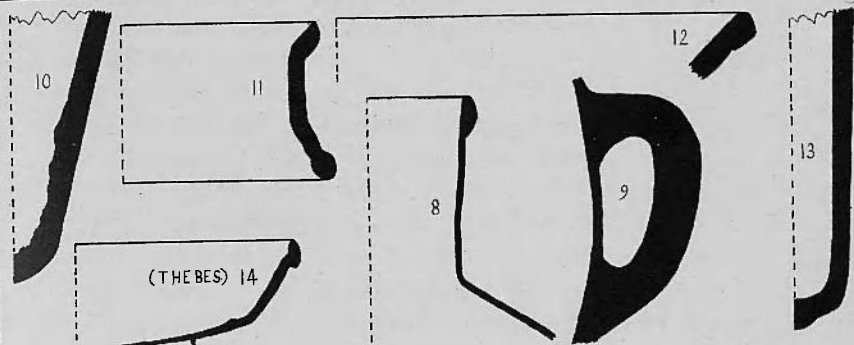
Scale $\frac{1}{4}$



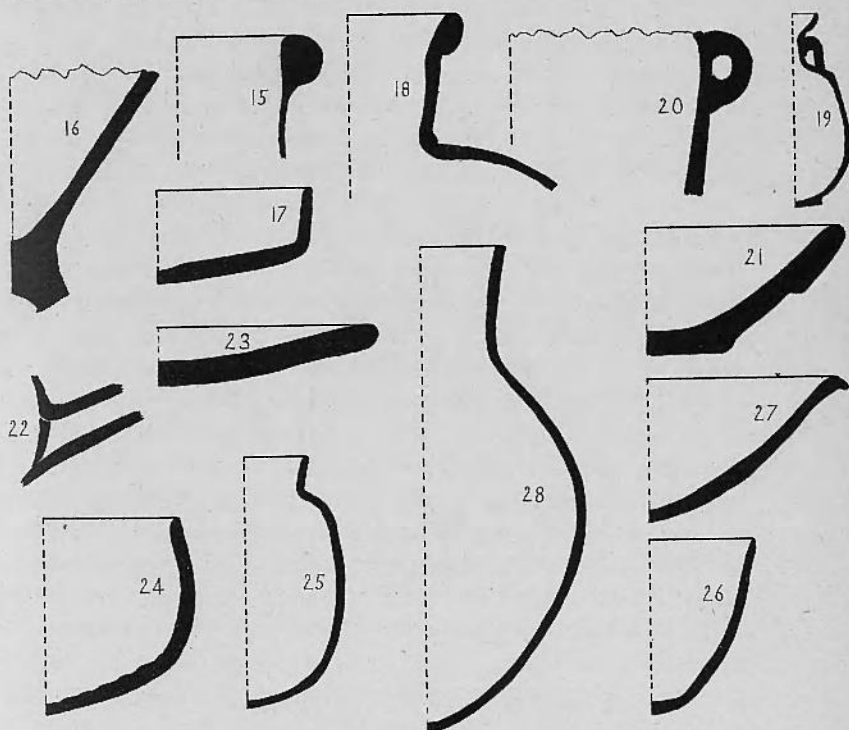
IVTH DYNASTY, GIZEH.



VIIITH DYNASTY, DAHSHUR.



XVIIITH DYNASTY, TEL-EL-AMARNA



GREEK.

GIZEH.

did I meet with in walking over the town. The most characteristic feature of the pots of this age is the prevalence of painting; the ground was a warm pale red on the brown red pot, on this were bands of bright blue, and patterns picked out in brown and indian red. This painting is quite unmistakeable, and apparently belongs to the Empire in particular. Another special characteristic is a pale brown ware, with a brightly polished white face; and a dark brown ware, with polished red facing. The varieties found may be catalogued thus:—

White face, polished; pale brown paste, with white specks, hard; Form 8; and large handles, form 9.

Same ware unpolished; form 8; form 10, jar bottoms.

Ring shaped stands to hold round bottomed jars.

Red faced, polished; red or grey paste; .2 to .3 thick, large vessels.

Same, unpolished; .5 to .8 thick; bowls about 20 inches diam., form 12, with rope pattern.

Brown with white specks, coarse and rough; .3 thick; cylindrical jars, .16 diam. inside, form 13.

The blue glaze ware of this period is remarkably brilliant; fragments of jars and of tiles are common, beside the trinkets and rings, which are conspicuous not only for their brightness, but their variety of colour; blue, green, purple grey, lavender, red, yellow and white, and very usually two or more colours in one piece.

Pottery precisely similar to that of Tel-el-Amarna, may be found at Memphis, by the ruins of the great three-storied houses on the extreme N.W. of the mounds; and trinkets of this period are found at Gizeh. At Thebes, on the edge of the desert, between the Ramesseum and Gurneh, are sites of pottery which may be attributed to the nineteenth dynasty. Its colouring and decoration is generally like that of the eighteenth, but it has just the difference perceptible between the other work of these two dynasties; it is coarser, poorer in colour, more mechanical and less flowing in painting, and altogether of a deteriorated type. Similar pottery may be found at Karnak. The same polished red-faced ware may be found also at Thebes as at Tel-el-Amarna, see form 14; both at Memphis and Thebes, pieces of the pots may be found in

which the blue paint was fritted in the furnace ; with the half melted remains sticking in them.

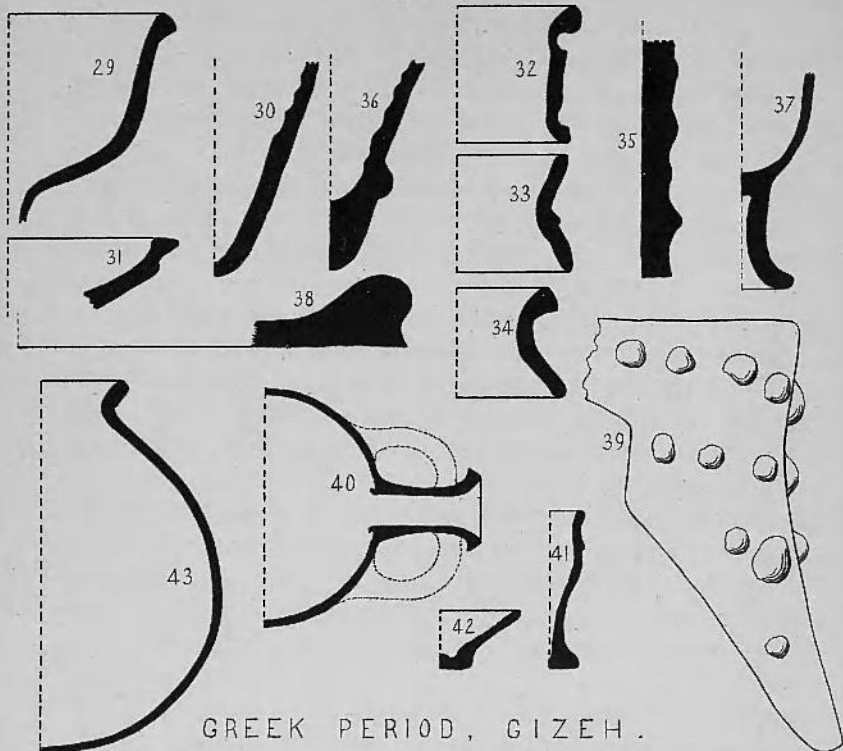
A valuable example of dated pottery of the nineteenth dynasty is found at the Ramesseum. Here wine jars with inscriptions are met with, bearing the name of Ramessu II ; a fine example of these, may be seen in the British Museum. The ware is like that of Tel-el-Amarna, pale brown paste with white specks, with a thick drab-white face ; thickness .1 to .3. Form, pointed amphora with handles.

After this nothing can be dated of the common ware, though of course blue glazed ware of dated periods is easily met with. The funereal statuettes give the best examples of dated glazes ; under the twenty-first dynasty the dark blue with brilliant purple patterns was fashionable ; and later, in the twenty-sixth dynasty, the style of figures was much neater, like the rest of the Renaissance work, and glazed with pale blue and blue-green. Among the Memphis mounds, pottery that looks like a very late deterioration of the eighteenth dynasty style may be met with ; it perhaps belongs to the Assyrian period or the Renaissance.

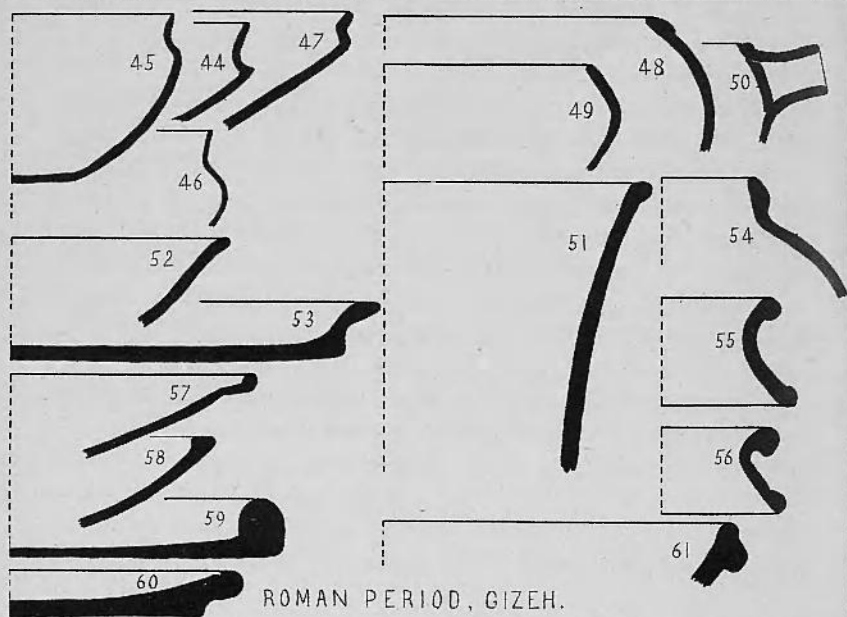
We next have two separate classes of pottery before we come to the late Roman. One of these two is mingled with Greek ware, and is found in a village at Gizeh, built on the ruins of a temple which was erected about 1000, B.C ; and yet the village was deserted before the cessation of burial in well tombs. This can hardly therefore be placed to any but the Greek period, probably between 500 and 100 B.C. The other class of pottery joins on to this in many of its forms ; but it is coarser, and farther in its style from the Ramesside pottery ; and it has with it, in all its sites, a mixture of fine red-faced ware, like imitation Samian. Beside this, in three cases, green beads, such as were introduced in 1200 to 600 B.C., have been found baked in the pottery ; evidently having been mere waste at the time of its manufacture. From these considerations, it seems almost certain that the second class belongs to a period after the first, and may be roughly described as of Roman date.

Of the first, or Greek period, there is a great variety of forms and also of material. But though there is such a

Scale $\frac{1}{4}$



GREEK PERIOD, GIZEH.



ROMAN PERIOD, GIZEH.

wide difference between the characters of much of it, it is certainly all contemporaneous; as I have picked out pottery in many places from the stratified rubbish of the village at Gizeh, of the most different qualities, though in the same stratum. The coarsest blackish brown ware of an inch thick, was used along with fair red brown a quarter of an inch thick and of refined forms; and also with fine red ware, with a polished bright red face. This great difference may be attributed to the coarse ware being local, and made by unskilled hands; while the finer qualities were imported from other parts of the country; and the abundance of the coarse ware renders this the more likely. The principal site of this ware is the large village on the east of the great pyramid, described with a plan in my first paper, and the different qualities may be described thus:—

Light red-brown; very fine and hard, with brown bands.

Forms 15 and 16, some $\cdot 5$ thick. Vases with rude face of Bes, and painted black in lines. Painted all black, and with micaceous surface.

Red brown, with fine reddish white facing; form 17.

Pale brown facing; form 18. Sometimes painted with red bands.

Grey-drab or greenish grey; forms 17, 19, 20. Some painted all black. Some with finely smoothed surface, form 21.

Light-red, fine; polished crimson-red facing. Spout, form 22.

Red brown, polished crimson facing. Flat dish, form 23.

Bowl, form 24, but larger, 10 in. diam. and $\cdot 5$ thick.

Light brown, hard. Form 25.

Medium brown red, half hard. Forms 24, 26, 27, 28, 29, 30, and 31. This often has a purple tint in the middle.

Reddish brown, coarser black in middle. Forms 23, 32, 33, 34, 35, 36, and 37, (rather finer with black painting). Rudely modelled animals of this ware are also found, and funnels without a tube.

Brown, very coarse; flat dishes, form 38.

Black, hard; from $\cdot 3$ to $\cdot 7$ thick.

Among the peculiarities of this period are cooking stands, to support round-bottom pots over a fire. These

are five and eight and half inches high, with the top plate 1·2 thick, with two round holes to rest the pots in, and supported on four legs; only fragments have been found, and the leg of one stand is shewn in form 39. The ware is coarse red brown, sometimes painted thickly with whitening, and ornamented with knobs. Pieces of similar ware pierced with holes may be parts of fire baskets.

Large handles are also found in this period; a piece of an unusual one is two inches diameter, and must have been ten inches or a foot high, ware coarse, light red brown.

Another peculiar form was made by turning the vase in two parts, like pans, on the wheel; joining their edges, and then piercing a hole in the circumference and inserting a neck, usually with two small handles. This form first came into fashion for superior ware in the twenty-sixth dynasty apparently; and it is therefore just in agreement with the Greek age we have assigned to this class of pottery, to find this form in common use on this site. The ware is usually of medium and fair red, faced with a smooth coat. The diameter of the vessels were generally only about four inches, the largest found being eight inches; see form 40. One unique mode of forming it was observed, where the clay had been moulded on a bag of sand or bran, which was shaken out after it was baked; the inside has thus a perfect impression of the cloth, and even the seam of the bag.

A curious example of rough red ware is a pan with a row of little craters or receptacles, about one inch diameter, stuck on around the inside. Dr. Birch has suggested that it might have been to hold the stems of a row of lotus flowers.

Draughtmen, formed of waste scraps of pottery chipped round, are very common in this period; varying from .8 to three inches across; weaving weights of pottery are also found, worn in grooves by the thread running through them, sometimes made of a broken jug neck.

Lastly there is a class of vessels found sparingly in this period, but extremely abundantly in the next. These are the little vases and saucers of brown ware, forms 41 and 42, which have been attributed to the tombs of the most ancient times of the pyramid builders. Against this

attribution it should be noted :—(1) That they are never found except associated with domestic pottery. (2) That they are extremely abundant in sites of villages, where there are but few early tombs. (3) That all the pottery with which they are constantly associated is of late date ; absolutely proved to be such, by its overlying ruined tombs, by having blue beads baked in it, and by having Greek letters marked on it. (4) That the ware is not like any of the pyramid period, as we now know it from the masons' heaps. Lepsius also does not figure any of it in his plate of pottery of the old kingdom. These reasons seem to be quite conclusive ; and though I have been told that these little vases have been found in early tombs, yet as all the early tombs have been ransacked in old times, some proof should be given that these vessels were not left there by a tomb-dweller, or were not thrown in with rubbish. Some of the old tomb wells were used as rubbish pits, and filled with broken pottery in late times. What the use of thousands of these small vessels can have been it is difficult to say ; but perhaps it will not be far wrong to suppose that they were for offerings of oil and corn to the household gods, and that there was some religious reason against their repeated use.

Another vase that probably belongs to this period. was found near the Sphinx. It is of form 43, of a hard, red ware, with a white wash over it, very much like the Pyramid masons' pottery ; yet as it is marked IN on the neck, it must be of Greek or Roman times.

Of the next, or Roman, period, there are many sites at Gizeh. These will be here distinguished by letters, as follows : A, site north-west of Great Pyramid, partly over ruined tombs, partly on rock ; G, site in the ruins of the second pyramid temple ; H, site south-west of the Great Pyramid ; K, site at foot of the cliff on which the Great Pyramid stands ; these are probably the rubbish heaps of the next site ; L, on the top of the cliff, north of pyramid, above K ; P, site south-east of the Third Pyramid ; T, site by the ruins of the pyramid at Abu Roash. In nearly all of these sites, walls or fragments of crude bricks may be seen, showing that they were actual dwelling places.

The various qualities are as follows :—

Red, with bright polished red surface. Bowls of forms

44, K and L; 45, A, G, T, and Abusir; 46, G, K, and P; 47, P; 48, A; 49, T; 50, P; 51, A.

Red, poorer body, but smooth. 52, G. Same, $20\frac{1}{2}$ diam., 6 thick, P; 53, H.

Red, whitish facing, rough. 54, K; 55, 56, ring stands, A.

Red, medium. 57, H; 58, T; 59, H; 60, T; 61, G, rope pattern.

Red, coarse. 61, A; 63, P.

Black brown. 64, T, ring stands.

Brown and red brown. Saucers and vases. 65, 74, 82, 83, A; 66, 73, 79, 80, H; 67, 77, 81, K; 68, 69, 70, 71, 72, P; 75, 78, T; 76, L.

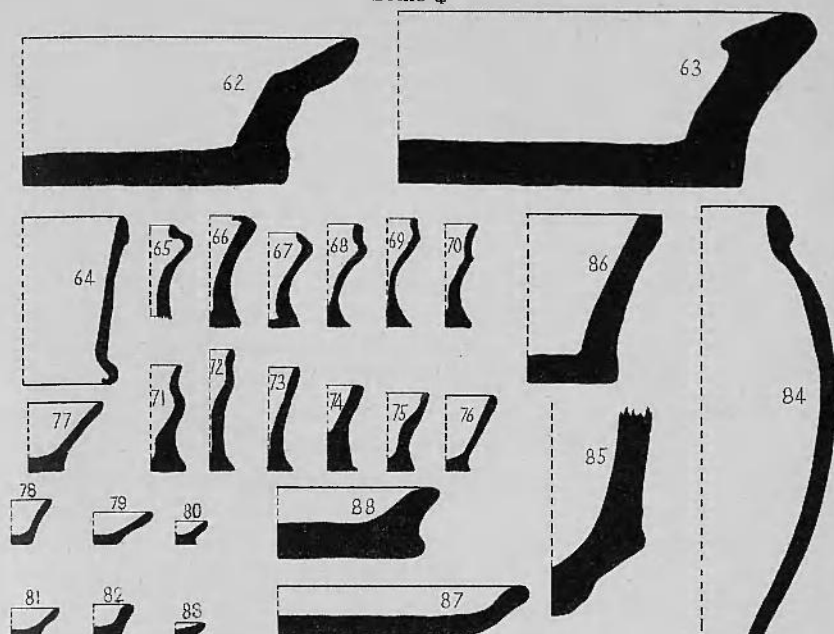
Very coarse brown and red brown. 84, A, H, K, L, P, T (the commonest form in these sites, varying to double the size and thickness, sometimes handmade); 85, K; 86, G, K, L, P, T (often larger); 87, P; 88, H, K, T.

There is also some pale red, drab-faced, and fine drab ware at H, like the Greek ware. Fragments, apparently of large stands for trays or jars, trumpet-mouthed at each end, are found at H, K, P, T. Fine and perfect examples of these are in the British Museum, of similar fine red-faced ware. The examples of blue beads found accidentally baked in the pottery were from K, P and T.

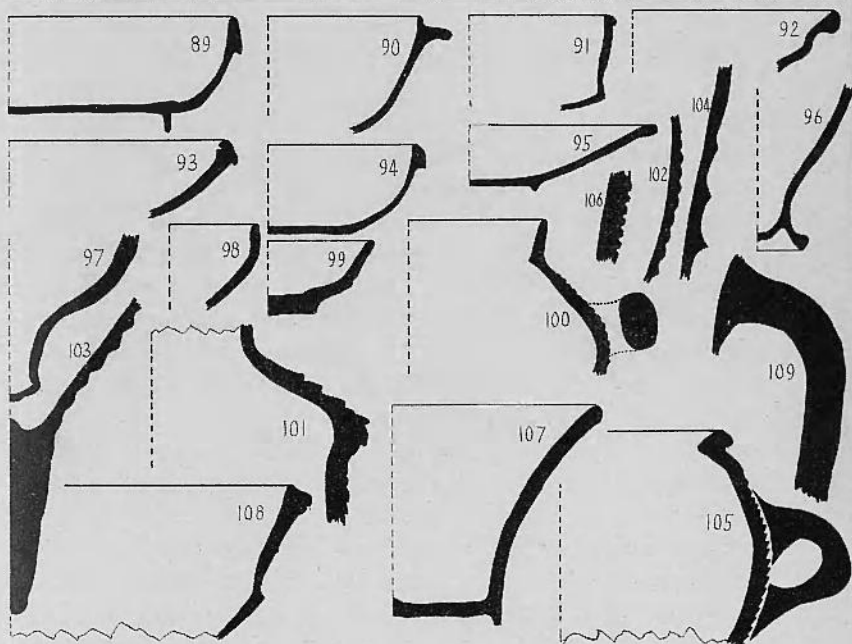
The next period of pottery shows a great change, in the universal adoption of ribbed outsides. Some of the ribbing is as fine as if made with a comb; other patterns are over an inch wide in the spaces; but it is a peculiarity almost essential to the pottery of the fourth century A.D. and onward; and it was continued down to a few centuries ago, even after the introduction of tobacco, as pipe bowls may be found, along with ribbed pots, in the Cairo heaps. Another speciality of this period is a dark yellow-brown ware, and also a salmon-coloured ware of a fine uniform paste, varying from almost white to full pink, but seldom with a polish or facing. Very fine, hard, polished, red ware, universally recognised in all countries as Roman, often called imitation Samian, is also found in this period. Painting is also common on the coarse ware.

The principal sites from which I have collected the pottery of this period are a series of Roman camps along the edge of the Nile valley near Gizeh, mentioned in my

Scale $\frac{1}{4}$



ROMAN PERIOD, GIZEH & ε



LATE ROMAN, GIZEH & ε.

first paper. In these camps, the pottery is always associated with pieces of glass vessels, often with the beautiful hollow rims; small brass of the Constantine family I have also picked up, showing the period; and another evidence of the age of this class of ware is that the Coptic letters in the British Museum are written on ribbed pottery, showing that it was commonly used in the fourth and fifth centuries; whereas, the earlier accounts and letters, down to the Antonines or further, are always written on fragments of smooth vessels, like the still earlier demotic inscriptions.

Denoting the sites, Ah., for Kom-el-Ahmar; Ki., for Gebel Kibli; and Gi., for a small patch overlying the Greek remains, just on the brow of the hill east of the Great Pyramid at Gizeh; the varieties of ware may be described thus:—

Bright red, very fine and hard, polished; "imitation Samian"; 89, Gi.; 90, Sakkara.

Salmon-colour, very fine and hard. 91, Sakkara; 92, Deir, near Abu Roash.

Salmon-colour, faced with red wash. 93, Sakkara.

Pale salmon-colour, fine and hard. 94, Ki. and Ah.; 95, Ki.; 96, Gi.

Red-brown, ordinary rough. 97, Ki.; 98, Gi.; 99, Gi.; 100, Ki.

Drab, or olive-grey. 101, Ah.; 102, Ah.

Brown, varying from ordinary to dark yellow-brown; not hard, and very liable to decompose. 103, Ki., Gi., Ah.; 104, Ki.; 105, Ah.; 106, Ki.; 107, Ki.

Black, rather hard. 108, Ki.

A profusion of large handles (109), often streaked down with the fingers, is also a characteristic of this period. These occur in salmon, rough red, and browns. Strainers are also often met with in the necks of jars. The characteristic ribbing is shown in forms 101, 102, 103, 104, 105, 106. It usually occurs on the dark-brown and drab; less constantly on the salmon, and never on the fine red. Another characteristic is repeated impressed patterns, marked by a bit of stick, or the fingernail; and these marks are usually put on diagonally. This is not seen except in this period; and it is not very common even here.

At Memphis, a large part of the heaps belong to this period, and rather later; and show various debased and altered forms of these types. But at Cairo, examples of every mediæval period may be met with; the earlier at Old Cairo, and the later forms nearer to the present city. Among the Arab pottery, even of the last three centuries, many of the old forms survived; and examples, closely like the forms, Nos. 34, 63, 77, 88, 95 and 107, may be met with.

It is remarkable how the same type continually recurs in Egypt. The bowls with recurved rims and spouts are found in the old kingdom before 2000 B.C.; also in Greek and in Roman times. The ring stands for holding round-bottomed jars are found in the eighteenth dynasty, Greek, Roman, and Arab times, scarcely varied at all in shape. The character of the ware is also remarkably the same in different periods; some of the fine red Pyramid pottery can scarcely be distinguished from Roman ware; and the brown paste with a yellow wash, found in the pyramid waste heaps, is exactly like vases with Greek letters upon them, also found at Gizeh.

This persistence of a type is very confusing, and it is necessary in exploring, to fix the attention on characteristic forms not found in more than one period. The characteristics of the eighteenth dynasty pottery are the blue and chocolate painting, and the polished white surface. The Greek period has its own light-brown ware, of very fine and hard texture; and the vases of pilgrim-bottle shape, with the neck in the circumference. And the late Roman has its ribbed surface, and salmon-coloured ware.

When the Egyptian antiquities obtain more room at the British Museum, there will, I hope, be a chronological arrangement of the dated types of pottery, which I have collected, and here described.