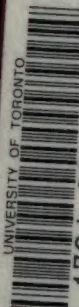


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EGYPTIAN ARCHAEOLOGY, VOLUME II.

THE  
EARLY DYNASTIC CEMETERIES  
OF  
NAGA-ED-DÊR

PART I

BY

GEORGE A. REISNER

J. C. HINRICHS, LEIPZIG

1908

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TO  
MRS. PHOEBE APPERSON HEARST

WHO, IN THE INTEREST OF THE UNIVERSITY OF CALIFORNIA, HAS BORNE FOR FIVE YEARS  
THE ENTIRE FINANCIAL BURDEN OF SCIENTIFIC EXPEDITIONS IN PERU, NORTH AMERICA  
AND EGYPT, THE SERIES OF PUBLICATIONS ON EGYPTIAN ARCHAEOLOGY OF WHICH THIS  
IS THE SECOND VOLUME, IS HEREBY GRATEFULLY DEDICATED.







## PREFACE.

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In 1899, Mrs. Phoebe A. Hearst entrusted to me the organisation and direction of an Egyptian Expedition. She bound herself by contract to provide all the funds for the Expedition for five years. The object of the Expedition was to make historical and archaeological researches for the University of California, and to provide material for an Egyptian Museum at that University. Later, with Mrs. Hearst's support, a great scheme of anthropological research was organized under the general direction of Professor Putnam of the University of California, and of the Peabody Museum of American Archaeology at Harvard University; and the Egyptian Expedition became part of that general scheme. I was made responsible for the Egyptian work, and was given perfect freedom in the appointment of my assistants and in the methods of work. Supported by Mrs. Hearst alone, the expedition continued its active field work for six years. After that date, working on ample funds provided by Mrs. Hearst, the expedition has continued the work of publication. The present volume is the first of a series of publications to be issued by the expedition on its excavations. A second volume by Mr. Mace is in the press, and other volumes are under way.

In the spring of 1899, I engaged Mr. F. W. Green of Cambridge University to help me. He had been with Mr. J. E. Quibell at Hierakonpolis in 1897—8, and alone at the same site in 1898—9<sup>1</sup> working for Prof. Petrie's Research Account. And somewhat later, I engaged Mr. A. M. Lythgoe who had been a student with me while I was an instructor at Harvard University in 1896—7. He had just been appointed instructor at the University, and gave up that place to come to the Hearst Expedition. With the help and advice of Dr. Ludwig Borchardt and especially of Mr. J. E. Quibell, the plan of work for the first year was formed; and I determined to look for the cemetery of Coptos (Keft) in the desert east of that place. Mr. J. E. Quibell went on a trip of inspection with me to Keft, Der-el-Ballas, Ballas, El-Kab, Kom-el-Ahmar, Matana, Esneh, Edfu and other sites in September 1899. Absolutely inexperienced as I was in camp life, Mr. Quibell and his sister, Miss Kate Quibell, were of the greatest assistance to us in the organization of a rational camp life at the start.

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<sup>1</sup> See Egyptian Research Account, Hierakonpolis I and II, (Quaritch, London).



Mr. Green brought with him a certain number of men, trained, some of them by him, and some by Mr. Quibell. We also got ten or twelve men who had worked with Prof. Petrie at one time or other.<sup>1</sup> The rest were green hands. On this basis, by a process of selection and training, our organized gang of workmen was built up, which is at present, I believe, the best trained and most effective gang in Egypt. This includes a photographic staff, headed by Said Ahmed Said, which has this year (1906—7) done practically all the photographic work for the Harvard-Boston Museum Expedition, including the taking of photographs, the developing of the negatives, and the making of the prints.

In December 1899 and January 1900, we searched the desert at Keft and finally found the cemetery inaccessible in the cultivation between the village of Kellahin and the village of 'Awedat.<sup>2</sup> In the meantime a predynastic flint camp was found and excavated; and a plundered predynastic cemetery at Shurafa was examined. In February, the whole expedition moved to Dêr-el-Ballâs, where in the spring, February—July, 1900, and November—December, 1900, two 18th dynasty cemeteries, a number of houses, and two mud-brick palaces were excavated.

In May 1900, having been informed by Sobhi Effendi, Inspector of the Department of Antiquities, that plundering was going on in a predynastic cemetery at El-Ahaiwah, opposite Menshiah, I obtained permission from the Department of Antiquities to excavate that site. During May—August, I worked at El-Ahaiwah on a predynastic cemetery, a cemetery and a town of the late New Empire, and a fort which showed signs of occupation from the Middle Empire to the late New Empire.

In November—December, 1900, work was resumed on the palaces at Dêr-el-Ballâs. In December, Mr. Lythgoe was sent with a gang of men to search the desert to the south as far as a predynastic cemetery which Quibell and I had seen in 1899, which I now wished to excavate. In the meantime Mr. Quibell had informed us that the site of Naga-ed-Dêr opposite Girga and about five miles south of El-Ahaiwah, was being plundered. Having obtained permission from the Department of Antiquities, I went to Naga-ed-Dêr on February 1st, 1901, leaving Mr. Lythgoe to finish up at Ballâs and at Dêr-el-Ballâs.

It soon became clear that we had at Naga-ed-Dêr a series of cemeteries from one community covering a long period of time, and that important archaeological results might be obtained from the systematic excavation of these cemeteries. From February 1st, 1901, to March 1903, active field work was carried on at the site; and the series of cemeteries was found to be nearly complete from the earliest predynastic period down to the present day.

Mr. Green left the expedition in May 1901; and Mr. A. C. Mace, who had been with Prof. Petrie for four years, was engaged in his place, and joined the expedition in November

<sup>1</sup> Prof. Petrie had begun work some weeks before our work began, and had already taken all the men he wanted from Keft.

<sup>2</sup> Since then reports of plundering have confirmed this conclusion.



1901. Mr. Lythgoe was sent to Keft and Dêr-el-Ballâs in November—December 1901, to take a fresh series of photographs at these places and to close the camp at Dêr-el-Ballâs. In December 1901—March 1903, Mace worked on Cemetery 3500, I worked Cemetery 100, and Lythgoe worked on the predynastic cemetery 7000.

In the spring of 1902, Mr. Quibell informed me that Dr. G. Elliot Smith, professor of Comparative Anatomy at the Khedivial School of Medicine, wished to obtain somatological and other material for researches on the racial characteristics, the diseases, and the treatment of bodies for burial of the ancient Egyptians. I immediately offered him all our material, which at that time, owing to the condition of the bodies in Cemetery 7000, was particularly interesting. Thanks to the courtesy of the Ministry of Education and of the head of the Khedivial School of Medicine and to their interest in scientific research, Prof. Elliot Smith was permitted to spend a number of weeks examining the skeletons in the graves; and he has continued to do the anatomical work of the expedition down to the present day.

In March, 1903, Mr. Mace was sent with a gang of men to begin work at the Pyramids of Gizeh. In 1903—4, I took charge of the Gizeh work, while Lythgoe and Mace finished up the work of mapping, planning, photography etc. at Naga-ed-Dêr. The excavations at the Pyramids led to the clearing and the identification of the separate royal cemeteries of Cheops, Chephren and Mykerinos, the later cemeteries of the priests of these kings, and the accumulation of a mass of material on the development of the mastaba, the masonry, the art and the burial customs of this period. This material, moreover, confirms and completes the material at Naga-ed-Dêr and finds its proper place in the chronological series of that site.

Mr. Lythgoe had, in 1902, been appointed curator of the Egyptian Department of the Boston Museum; and in 1904, he returned to Boston to take up his duties there. In the meantime, in 1903, Mr. N. de G. Davies, who had been working for the Egypt Exploration Fund, was engaged to do the copying work of the expedition; and worked partly for the Fund, partly for the Hearst Expedition, and later for the Harvard-Boston Museum Expedition, during 1903—5.

Since 1905, the field work of the expedition has been continued in the interest of Harvard University and the Boston Museum of Fine Arts, supported by a subscription fund which has been in charge of a committee consisting of Mr. Gardner M. Lane, Mr. Francis Bartlett, and Prof. George F. Moore.

It is not possible here to give a detailed account of the methods of work of the Expedition; but I wish to indicate the general principles which have been followed by the Expedition, especially in its later work.

1. It is necessary to have an organized staff of Europeans and of workmen trained in all branches of the work, and following careful methods of excavation and recording *as a habit*.



2. It is necessary to excavate whole sites and whole cemeteries. The excavation of individual tombs, while interesting and at times valuable, does not provide that sufficiency of continuous material which is necessary to justify conclusions on the development of a civilization such as we have in Egypt. The discovery of beautiful objects is, of course, greatly to be desired; but the search for Museum specimens is an offence against historical and archaeological research which is utterly unworthy of any institution which pretends to be devoted to the advancement of knowledge.
3. Every cemetery and every building represents a series of deposits which ought, so far as practicable, to be taken off layer by layer in the inverse chronological order and recorded layer by layer.
4. It is necessary to make a complete record by drawings, notes and *photographs*, of every stage of the work. We have found it possible to record every tomb in a cemetery, plundered and unplundered, by photography, and, moreover, every important stage in the excavation of each tomb.
5. It is necessary to publish these records so far as practicable, *tomb by tomb*, and at the same time to give a careful systematized consideration of the material they contain. The hasty and incomplete publication, year by year, of the season's work, with the temporary working hypothesis of the hour, satisfies the curiosity of those who have a less direct interest in the work, but tends to deprive the systematic archaeologist of a large mass of useful material.

I wish gratefully to acknowledge the obligations of the Expedition to the Service des Antiquités of the Egyptian Government, and especially to Prof. Maspero for the granting of concessions to the expedition, and for the justice and generosity which has been manifested in dividing the proceeds of our excavations.

I wish also to thank Mr. Quibell and Prof. Borchardt for their assistance in the first year of the expedition, and subsequently for their continual advice and sympathy.

GEORGE A. REISNER.



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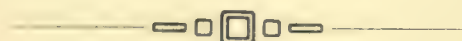
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## I. THE CEMETERIES OF NAGA-ED-DÊR.

AT a point about one kilometer north of the village of Naga-ed-Dêr a spur of limestone lies in advance of the main limestone wall, separated from it by deep ravines. On the top of this spur is the ruined tomb of a Sheikh Farag (Pl. 1 s.). At present the river washes the base of the spur. Between Sheikh Farag and the village, the edge of the desert slants away from the river, bearing generally southeast (locally called *kubli* "south"), and is broken by three large ravines opening on the cultivation (Pl. 1 1, 2, 3).

The surface of the top of the Sheikh Farag promontory falls away from the edge to a depression about one hundred meters wide and then rises to a high hill overlooking the ravines which separate it from the main cliff. This depression has received a deposit of gravel and debris of varying depth, and contains a number of shaft graves and mud-brick mastabas of the eighth to twelfth dynasties. The slope of the hill behind the plateau contains rock-cut tombs of the same period. These have all been grievously plundered in both ancient and modern times. From Sheikh Farag south to the mouth of the first ravine, there is, at present, no gravel slope in front of the cliff, owing to denudation by the river, perhaps during the Christian era. The face of the promontory, as far as the first ravine, once contained tombs cut in the rock which have now been almost entirely removed by quarrying and by natural denudation. Cemetery 9000

The mouth of the first ravine is about forty meters wide; but, on the south side, about twenty-five meters of this distance is occupied by a gentle alluvial slope. This slope was first used as a cemetery in the second and third dynasties, although it contains one prehistoric burial. Later this second dynasty cemetery was buried by from fifty to seventy centimeters of debris from its own superstructures and from the sides of the ravine above; and it was then covered by a cemetery of the sixth and seventh dynasties which extended northwards up the southeastern side of the ravine and was added to in the eighth to twelfth dynasties. Cemetery 3500

South of the first ravine, just as at the north of it, there is, *at present*, no gravel slope between the face of the cliff and the cultivation. But the face of the cliff rises in a very steep slope, the lower part of which contains burial pits of the sixth to eighth dynasties, covered with rough rubble mastabas or mounds. The upper part contains rock-cut tombs of about the same period. Cemetery 3500 continued

This cemetery of the sixth to eighth dynasties extends up the sides of the *second* ravine and over the low alluvial mound on the north side of the mouth of the ravine. The top of the alluvial mound contains pit tombs of the sixth to seventh dynasties and, mixed with these, a great number of narrow Coptic graves. The side of the mound along the ravine is lined with chambered tombs of the tenth to eleventh dynasties, cut in the hard gravel. Cemetery 2000

Between the second ravine and the third ravine, the limestone cliff lies farther back from the cultivation and rises in two terraces with nearly perpendicular faces (Pl. 1 bottom picture).



The bottom of the face of the higher cliff is about forty meters from the top of the face of the lower cliff and is separated from it by a steep slope. From the base of the lower cliff, a low limestone shelf slopes out to the cultivation, about one hundred meters away. The surface of this shelf is covered with a thin layer of gravel and its edge is concealed by a low alluvial strip about ten to twenty meters wide, composed of strata of sand, gravel and black soil. On the south, this shelf rises to a low limestone hill (marked + on Pl. 3b) separated from the third ravine by a broad low mound of alluvial deposits. The shelf and its alluvial border are furrowed by three slight water channels and thus divided into four irregular tongues of desert-land (see Frontispiece and Pl. 2). The alluvial deposit at the tip of the first tongue south of the second ravine is occupied by a cemetery of the first and second dynasties (Frontispiece and Pl. 2, 1, being Cem. 3000). The base of the second tongue tip (marked 2 on Frontispiece and Pl. 2) is occupied by a tomb complex of the fourth or fifth dynasty; the tip has been cut away by modern quarrymen cutting limestone for lime-burning. The shelf behind these two tips is continuous and bears a field of small mastabas (Pl. 57a, fore ground) of the sixth to eighth dynasties together with some New Empire pits. The third tip (marked 3 on Frontispiece and Pl. 2) lies further back than the others, as its alluvial deposit has been cut away by natural forces. Its slope contains a cemetery of the sixth to eighth dynasties with a few later pits (20<sup>th</sup>). The fourth tip (marked 4 on Frontispiece and Pl. 2), which in fact clothes the base of the limestone hill (marked + on Pl. 3b) on the south of the shelf, contains a cemetery of the first and second dynasties (Cemetery 1500). The limestone hill itself contains rock-cut tombs and brick mastabas of the twelfth to twentieth dynasties.

The face of the first, or lower, cliff behind the limestone shelf described above, contains plundered rock cut tombs without incipations. The slope from the top of the first cliff to the base of the second contains chambered tombs and pits of the sixth to twelfth dynasties. The face of the second cliff contains rock-cut tombs of the sixth dynasty. Four of these have scanty inscriptions and reliefs but without any great interest or beauty.

The alluvial mound between the limestone hill and the third ravine (mentioned above) forms the north bank of the mouth of the ravine. The part nearer the cultivation contains a cemetery of the second and third dynasties; the middle part, a cemetery of the third and fourth dynasties, and the upper part a cemetery of the fifth and sixth dynasties.

The south bank of the third ravine is also an alluvial deposit, about twenty meters wide. Nearer the cultivation, this deposit contains pit tombs of the twelfth dynasty and on the edges chambered tombs of the tenth to eleventh dynasties. The upper part contains the predynastic cemetery (Cem. 7000).

Beyond the third ravine are rock-cut tombs in the face of the cliff all completely plundered. In front of this cliff lies the village of Naga-ed-Dêr. And to the south of the village lies the present day cemetery of the Coptic population of Girga.

The work of clearing the south side of the first ravine and the slope between the first and the second ravines has been carried on by Mr. Mace. The work on the field between the second and the third ravines has been carried on by myself. And the work south of the third has been in charge of Mr. Lythgoe. The results obtained from these different cemeteries



will be published in separate volumes. The whole of these taken together will give a review of the burial customs, types of graves and funerary offerings in the Thinite nome of indisputable historical continuity over a period extending from the earliest known predynastic times to the end of the Middle Empire with the exception of the late predynastic period. The present volume will deal with the early dynastic cemeteries between the second and third ravines.

## II. CEMETERY N. 1500.

CEMETERY 1500<sup>1</sup> occupies the alluvial slope at the base of the limestone hill which forms the southern part of the limestone shelf between the second and third ravines, described above. This alluvial slope consists of strata of hard gravel, sand, soil and loose gravel, of various thicknesses (see Pl. 11 d and 12 a). In this slope during the first and second dynasties <sup>Cemetery of 1st and 2nd dynast.</sup> some 50 graves were made, the most important of which consisted of large rectangular pits containing mud-brick chambers and covered by a mud-brick superstructure. Later, in the period of the middle and the new empires, that part of the slope within ten meters of the base of the limestone hill was covered to a depth of from 0 cm. to 100 cm. with debris thrown <sup>Plundered and covered with New Empire debris</sup> out from the rock-cut tombs of the limestone hill. It was clear from the continuity of this debris that the older tombs beneath it had, with the exception of the holes made by a multitude of Coptic graves (50—100 cm. deep), not been touched since the New Empire. This is particularly true of N. 1581; and therefore N. 1581, which had been completely plundered (see pl. 23 a, b), was plundered before the cutting of the New Empire tombs above. Thus to the events in the history of the slope, it is necessary to add the fact of at least one plundering of the tombs of the ancient cemetery, in or before the New Empire. On the analogy of similar plundering, it is probable that this took place within a hundred years (perhaps within a year) after the burials were made.

In the Christian era the site was used as a Coptic cemetery; and narrow Coptic graves <sup>Coptic cemetery</sup> pointing west, cut up more or less all the vaults and superstructures (see especially Plates xxviii b; xviii a; xxii b—c; xiii a and c; and xiv b). Furthermore the surface received a certain amount of debris from these Coptic graves.

Subsequent to this time, the outer part of the slope was eroded by the Nile (see N. 1541, <sup>Erosion by the Nile</sup> 1637 and 1641). The date of this erosion can not be fixed with any certainty; but it must be noted that, according to the chief men of the village of Naga-ed-Dêr, the main channel of the Nile ran close along the eastern desert no longer ago than 1860—1865. At that time, for some ten years, the waters of the river washed the base of this alluvial slope leaving Girga high and dry about half a kilometer from the western bank. During this or some similar period, or perhaps during several similar periods, part of the slope, apparently a very small part, was carried away.

Quite recently, within fifty years, the decayed brick and mud plaster of the ruined corbel vaults in the northern part of the cemetery attracted the attention of the *sebbâhin*. <sup>Sebbâh digging</sup> When

<sup>1</sup> This means that the numbering of the graves in this cemetery begins with 1501. They run to 1650; but some numbers were not used.



I arrived on the site in February 1901, the surface of the northern two thirds had been torn to pieces by these people. Over each of the large brick vaults was a depression one and a half to two meters deep. The spaces between were strewn with heaps of gravel from the *sebah* sieves, bleached Coptic bones, and archaic potsherds. The whole northern part of the cemetery was thus denuded to a level from 10—30 cm. below that of the first dynasty (see Plates II and III). During this *sebah* digging, antiquities were occasionally found, according to the villagers; but they were not systematically sought, so far as I can ascertain, until the summer of 1900. In that year, the whole site was invaded by a band of thieves from Arabah Madfunah (Abydos). Their example stimulated the villagers to dig on their own account. Quarrels arose. The matter was reported to Mr. Quibell, Inspector of the Department of Antiquities; and prompt action on his part suppressed completely the illegal proceedings before any great damage was done.<sup>1</sup> During this raid from Arabah Madfunah, the slope containing cemetery 1500 was also tapped; but after a few Coptic graves had been turned up, the spot was abandoned.

Modern  
plundering  
  
Condition  
February  
1901

Thus, when our work began, the southeastern part of the slope rested under the debris of the rock-cut tombs of the new empire. The middle third of the slope was badly cut to pieces by Coptic grave-diggers and *sebbhâin*; but patches remained in which the old first dynasty level, covered by 15—30 cm. of debris, remained intact. The northern third had been denuded to a level at least 10—30 cm. below the first dynasty level.

### III. THE EXCAVATION OF CEMETERY N. 1500.

THE investigation of the Naga-ed-Dêr cemeteries was begun in February 1901. After trial clearings had been made simultaneously, at cemetery 2000 on the north side of the second ravine, at cemetery 2500 on the north slope of the second ravine, at cemetery 1000 on the third land tongue, at cemetery 700 on the upper part of the northern alluvial bank of the third ravine and at cemetery 500 on the lower end of the same bank, it was determined to begin at the last named spot and work over the site moving northwards. After this bank had been cleared as far as it was possible at that time owing to the necessities of our photographic methods, work was begun on the next point to the north, — cemetery 1500. Here while digging Coptic graves in the undisturbed southern end, it was noticed that the stratum in which the skeletons rested was not *gebel* (mother earth) but debris. Following out this clue, first N. 1512 and then N. 1581 were cleared by descending into the main pits from above. The great depressions, to the north, which afterwards proved to be vaulted stairway tombs, were then cleared also from above, photographed and emptied of their contents. Then the stairways and surroundings of the large tombs were cleared; and at the same time the smaller tombs were uncovered. In 1902—3, the cemetery was worked over a second time with especial attention to the photography of the structural details and of the superstructures.

<sup>1</sup> The proceeds of this plundering were seen in the possession of dealers in antiquities at Kenh and Cairo in 1900—2.



## IV. TYPES OF TOMBS IN CEMETERY N. 1500 AND THEIR CHRONOLOGICAL RELATION.

### 1. Superstructure.

THE Egyptian tomb, in all periods including the present one, fulfils two functions, — that of a burial place and that of an offering place. Every Egyptian tomb, therefore, consists of at least two parts, — an invisible, or concealed, place for the protection of the burial and a visible, or accessible, place for the presentation of the offerings to the dead. The one is always underground; the other, usually above ground (superstructure).<sup>1</sup>

In the predynastic period, we have found as yet only the merest traces of reed or wood superstructure to mark the place of the burial (N. cem. 7000). In the first dynasty, there is the Menes tomb of Nagada<sup>2</sup> with its elaborate superstructure, and the tombs of our cemeteries 1500 and 3000.<sup>3</sup> In cemetery N. 1500, *wherever the first dynasty surface is preserved, remnants of superstructure have been found*. Unfortunately this surface is preserved only sufficiently to show fragments of the superstructure of three large tombs N. 1506 (Pl. 11 a, b), N. 1581 (Pl. 22 b, c) and N. 1514 (Pl. 28 c, d).

<sup>1</sup> The exception is the chambered tomb, beginning in 4<sup>th</sup> dynasty. In this type, the solid rock or gravel knoll must be thought of as the superstructure; and the offering-chamber as well as the burial chamber is hollowed out of the rock or of the hard gravel. The front is levelled off to represent the facade of an ordinary mastaba; and the interior, sometimes even to the roofing logs, is cut in imitation of mudbrick or stone constructions.

<sup>2</sup> The Menes tomb with its burial chamber above ground appears to be an anomaly. Ever since 1901, we were convinced that the real burial chamber must be under ground. Mr. Garstang's excavation in 1904 showed however that there are no under-ground chambers.

<sup>3</sup> In view of the fact that the substructures of the Naga-ed-Dér tombs were copied from the Royal tombs at Abydos (see p. 11 below), the presence of superstructures at Naga-ed-Dér suggests that there were similar superstructures at Abydos. The plans of the royal tombs at Abydos suggest that the subsidiary tombs may have been just outside, or under, the outer walls of a superstructure. The presence of the *weatherworn* stelae, both royal and private, make still more for the assumption that there were superstructures. And the fact that the royal stelae were found in pairs on the surface on the east side is still more significant, as Prof. Petrie has pointed out, R. T. 1 p. 6. But the reasons are invalid which Petrie gives for assuming that there were no superstructures, namely: (1) no trace of debris from a superstructure was found; and (2) the stelae were much sand-worn. Petrie thinks that if there had been a superstructure, at least some debris would have been left and moreover the stelae would have sanded up *before* becoming weather-worn. Neither of these grounds can be justified by facts. (1) That a well built superstructure whether of mud-brick (or of stone) may disappear utterly under the attacks of natives seeking building material or *sebah*, is shown conclusively by the condition of cem. 1500 and by what has happened at Abu Roash in the last ten years. Similar theft of material occurred anciently also at Gizeh. (2) There are stelae in the cemetery excavated this year by us at Gizeh on the outside of big stone mastabas which show even as great weathering as the Abydos stelae. Our experience there shows that sand does not tend to collect in the streets between the mastabas but blows in and out. Furthermore the sand in the Gizeh cemetery is almost entirely in the upper stratum. It began to collect *after* the cemetery had fallen into decay and indeed first of all in the *closed* hollows in the surface of decay and in the chambers of the mastabas. An isolated upright obstacle on a flat surface does not collect sand in Egypt. In that Petrie is right. But neither does a rectangular, regularly built pile of brick or masonry collect sand. There is no sand collected about the pyramids but only in the closed hollows about the sphinx and portal temple of the second pyramid. (3) There are stelae at Gizeh standing upright on the valley faces of mastabas which are *in all stages of denudation*. G. 1021 (partial), 1018 (partial), 1045 (complete), 1025<sup>a</sup> (complete), 1044 (complete), 1042 (complete). This denudation took place *before* the sanding up of the cemetery. Therefore *both back and front of the stelae* are weatherworn. When, in ancient times, a mastaba was denuded for its brick or stone, the offering niches were *as a rule* left undisturbed. (4) The weathering of stone walls, stelae, etc. at Gizeh took place during the sanding-up of the cemetery. The greatest damage was done at the *surface line of the growing stratum of sand* where small particles of sand were blown against and along the face of the stone like a small sand-blast.

In view of these considerations, it seems extremely probable that the royal tombs at Abydos were covered with superstructures, probably of mud-brick. I would like to suggest therefore that the Abydos tombs were covered with mud brick superstructures with two offering niches of stone on the valley side. The mud brick walls were partly denuded and partly let down into the substructure anciently leaving the stelae standing. The inequalities of the surface caused by the theft of brick and the collapse of the substructures were filled with sand in which process the stelae were weatherworn.



Filled  
Mastaba

The fragments of the superstructures of 1506, 1581 and 1514 show similar characteristics. Above the subterranean burial pit is a rectangular mastaba with its long axis running north and south (as understood locally, really ca. 45° east of south). The mastaba has thick outer walls of mud-brick, with a slight batter and is filled with gravel or rubbish. This superstructure is not oriented exactly like the substructure; and in the case of 1506 could only have been built after the substructure was covered over (i. e. after the burial). In the cases of the stairway tombs, 1581 and 1506, the difficulties of construction, the manner in which the stairways are filled, the absence of wooden coverings over the stairways, and the point at which the enclosing wall crosses the stair, — all taken together lead to the same conclusion; that the superstructure was built after the burial.<sup>1</sup>

Opening  
niches

The outer faces of the mastaba, on the southern side, on the valley (western) side and probably also on the northern side, are broken by a series of simple and compound niches (see Pl. II, 22 and 28). It is noteworthy that in the one case where part of the desert (eastern) face was preserved (N. 1581), it contained no niches. In no case was any part of the northern face recovered. It is uncertain whether there were more than one simple niche between every two compound niches or not. These niches are square conforming to the size of the bricks. That is, each face in the interior of the niche is formed in one case by half a brick, in another by a whole brick so that in one case the small niche is 1 brick wide and  $\frac{1}{2}$  brick deep, in the other, 1 brick wide and 1 brick deep, while the compound niche is in one case  $1\frac{1}{2}$  brick wide and 1 brick deep, in the other 3 bricks wide and 2 bricks deep (see map and fig. 65). In no case was the top of the niche preserved. But as all later niches are covered at the top,<sup>2</sup> these must also have been covered with wood or stone. And as stone is otherwise not used in the construction of these mastabas, it is probable that the niches, like the doorways of the substructure, were roofed with small branches with the bark on.

Enclosure

Around the mastaba was built a plain wall parallel to the faces of the mastaba and at a distance of from 50 to 100 cm. from it (see map). It was not possible to determine the height of this wall. But whatever its height, it formed an enclosure all around the mastaba, a sort of courtyard which prevented encroachment of other tombs on the mastaba itself and intrusion on the ceremonies of presenting the offerings to the dead. The floor of the enclosure was beaten mud laid on the desert and plastered. In one case (N. 1506) the enclosing wall was broken by an entrance which had a small oval platform about it.

Under the enclosing wall of N. 1506 were two burials; under that of N. 1514 was one burial. These burials were either contemporaneous or previous to 1506 and 1514 respectively (see N. 1538 and 1582).

<sup>1</sup> There is even more definite evidence to the same conclusion in the case of the later mastabas N. 761 and N. 742. This, of course, does not justify the conclusion that the superstructure was *always* built after the burial, either in this period or in the succeeding period. Large tombs like the royal tombs may have been prepared beforehand. But the statement is certainly true of *all superstructures* of the first to sixth dynasties which we have excavated at Naga-ed-Dér, and in all the tombs of the early fourth dynasty in Gizeh Wady. In other words, it is probably the rule for poor tombs and may often have been the case in larger tombs.

<sup>2</sup> N. 578, 579; N. cem. 3500 numerous cases; G. W. numerous cases, especially G. W. 24 and 72. In these cases, a single brick or a stone slab is used to roof the niche or a mere vertical mark is made in the plaster with the finger or the hand (G. W. 39 and 62). In none of these earlier cases, is there any attempt to copy the wooden beam in stone or mud. But the later tombs in Gizeh Wady (G. W. 19 and 33) present example of the wooden beam copied in stone. In Covington's tomb at Gizeh, the niches were roofed with tree branches.



The outer faces of the mastaba, the floor of the enclosure, and *both* faces of the enclosing wall are plastered first with mud and then with a pinkish-white lime plaster, — fine and smooth. In addition, the inner niche of the compound niche in the face of the mastaba is painted red. Plaster

Such was the superstructure of the tombs so far as preserved. In view of the fact that in all the other tombs in this cemetery the old surface was destroyed and that in cem. 3000, the one case where the surface was preserved showed there also a similar superstructure, it becomes well nigh certain that all the large tombs of these cemeteries, and probably also the smaller ones, possessed superstructures of a similar type.<sup>1</sup> It is unfortunate that these superstructures are not preserved because their relative positions would have given us final conclusions on the chronological order of all the tombs. As it is, we are forced to rely solely on the evidence of general position and types of substructure. Conclusion

## 2. Substructure.

The burial place of all tombs in cemetery 1500 is a rectangular pit or chamber sunk in the desert and lined with a mud-brick construction. Wooden logs or branches in a natural state are used as accessory material. Stone does not occur as a building material.<sup>2</sup>

All the types of substructures in cem. 1500 fall into two main groups, — (A) structures roofed with wood; and (B) structures roofed with a corbel vault. These groups may be subdivided as follows: Types of substructure

### A. Tombs with a wooden roof.

#### 1. Entered from above.

a) Small tombs with a single chamber. For examples, see below p. 10.

b) Large tombs with more than one chamber.

N. 1506, 1621, 1624, 1508, 1532, 1533 (3016).

#### 2. Entered from the side (stairway).

a) Small tombs—*do not occur!*

b) Large tombs with more than one chamber.

N. 1512, 1581 (3062, 3071).

### B. Tombs with a corbel vault as roof.

#### 1. Entered from above (i. e. closed corbel).

a) Small tombs with a single chamber.

N. 1623, 1640 (see cem. 700).

b) Large tombs—*do not occur!*

#### 2. Entered from the side or end (stairway or incline).

a) Small tombs with a single chamber or with rudimentary corner chambers.

N. 1611, 1612, 1613, 1614, 1562, 1619, 1633, 1630, 1648, 1622 (3012, 3014, 3015, 3022, 3023, 3053).

b) Large tombs with more than one chamber.

N. 1571, 1514, 1515, 1513, 1586, 1584, 1572, 1605, 1626 (3017, 3013, 3031).

<sup>1</sup> The only fact found in Cem. 1500 which might be more easily explained on the assumption that there were no superstructures was the contiguity of 1572 and 1571. Even this does not preclude absolutely the existence of a superstructure to 1571; but makes it probable that the owner of 1572 was a relative of him of 1571 and restored, while building the superstructure of his own tomb, whatever damage he may have done to 1571 (see also 3013 and 3071).

<sup>2</sup> Rough limestone slabs are used however in Cem. 3000 to support the corbel where it crosses the angle of the wall.



## 3. Chronological relations of the tomb types and the divisions of the cemetery.

It must be remembered that the wood-roofed grave with mud-brick lining occurs in the predynastic period (el-Ahaiwah, Ballâs, N. 7000, etc.), but not in any known cemetery subsequent to the third dynasty. Further the single chambered corbel vault without an entrance is not known anywhere earlier than this cemetery; but it occurs regularly in the poor graves of the third and fourth dynasties (N. cem. 700; G. W.; Reqaqnah). It is therefore certain that (1) *the wood-roofed tombs are in general earlier than the corbel-vaulted tombs*. Now in cemetery 1500, the small wood-roofed tombs *never* have an entrance on the side and the large wood-roofed tombs have it in only two cases. At the same time the large corbel-vaulted tombs *always* and the small ones usually have an entrance on the side or end (with stairway or incline). We may therefore conclude that (2) *in our cemetery the stairway tomb is later than the tomb without a stairway or incline*.<sup>1</sup>

Further there are but two corbel vaults without an entrance in this cemetery,—both of them apparently intrusive. They are like the 4<sup>th</sup> dynasty corbels of cem. 700 and are probably later than the rest of the cemetery. All of the corbels which are *certainly* contemporaneous have side or end entrances. Therefore (3) *the closed corbel is later than the corbel with entrance*.<sup>2</sup>

Or, to put it simply, we know the wood-roofed tombs without stairway in the predynastic period and the corbel tomb without a stairway in the third and fourth dynasties. Therefore it is *a priori* probable that the genesis of these different types of tombs is in the following chronological order:

Chronological  
order  
of genesis  
of tomb  
types

- A. 1. Wood-roofed tombs without entrance.
- A. 2. Wood-roofed tombs with entrance.
- B. 2. Corbel-vaulted tombs with entrance.
- B. 1. Corbel-vaulted tombs without entrance.

That type A 2 is in our cemetery actually later than A 1 and earlier than B 2 is shown by their relative positions in the cemetery. The wood-roofed tombs without an entrance (A 2) hold the middle line of the site with the other two groups one on the south and the other on the north. Further that type A 2 is earlier than B 2 is shown by the presence of pottery of types I, II and XXVIII in 1512—pottery types which occur in tombs of type A 1 but not in tombs of type B 2.

Chronological  
divisions  
of the  
cemetery

The map of the cemetery shows that the large wood-roofed tombs are all in the southern part of the cemetery, while the large corbel vaults are with one exception in the northern part of the cemetery. That exception is corbel vault N. 1626 which is manifestly intruded in the southern cemetery and later than the wood-roofed tombs about it. At the only point where the two groups of tombs touch, corbel vault N. 1514 is later than wood-roofed N. 1506, being built immediately in front of it yet so that the entrance to the enclosure of 1506 is left free,<sup>3</sup> as

<sup>1</sup> It will be shown in another place that the stairway in the long axis of the tomb is later than the stairway, here referred to, descending from the side.

<sup>2</sup> We have been unable to trace a *direct* historical connection between the corbel with entrance and the closed corbel. A type with a stone roof intervenes in the Naga-ed-Dêr cemeteries (500, 700, 3500).

<sup>3</sup> This phenomenon—the building of later mastabas in front of earlier ones but leaving the entrance to the offering place free—occurs repeatedly at Gizeh.



*if it were still in use.* Add to this that all but three or four pottery types are common to both groups, and it is clear that *the northern part although later than the southern part as demanded by the chronological order of types established above, is in immediate succession to it.*

#### 4. Chronological order of the different tombs of each type.

There are a number of small groups of tombs in which the relative dating of the different tombs in the group is clear from their relative positions, as follows:<sup>1</sup>

1. 1506 (large wooden roof) is earlier than 1514 (large corbel). Referred to above.
2. 1626 (large corbel) is later than 1508 (large wooden roof). Referred to above.
3. 1617 (small wooden roof) is older than 1586 (large corbel).
4. 1616 (small wooden roof) is later than 1562 (small corbel with entrance).
5. 1572 (large corbel) is later than 1571 (large corbel).
6. 1572 (large corbel) is later than 1513 (large corbel).
7. 1572 (large corbel) is earlier than 1605 (large corbel).
8. 1648 (small corbel with entrance) is earlier than 1605 (large corbel).
9. 1584 (large corbel) is later than 1514 (large corbel).
10. 1619 (small corbel with entrance) is later than 1618 (small wooden roof).
11. 1613 (small corbel with entrance) is later than 1614 (small corbel with entrance).
12. 1562 (small corbel with entrance) is later than 1614 (small corbel with entrance).

*Material  
on the  
chronologi-  
cal order  
of the  
different  
tombs*

##### *Chronological order of tombs of Type A. 1. a., small wood-roofed tombs.*

Just as there are family complexes of small tombs in the third and fourth dynasty and family mastabas in the fourth to sixth dynasties, so there are family (or subsidiary) complexes about the royal tombs of Abydos. At Naga-ed-Dêr, the subsidiary tombs are not built in complexes as at Abydos; and yet it is clear that the small tombs around any large tomb are contemporary with it, provided that the difference in orientation is not too marked and that the small tombs are not in a position, which would interfere with the superstructure of the large tomb (for example, 1617 cannot be contemporaneous or immediately after 1586). On the other hand, a large tomb might occasionally be built in the midst of and regardless of older, smaller tombs (for example, 1586 cutting off the older(?) tombs 1617, 1618 and 1501 from the southern cemetery and 1605 with its entrance cutting across the entrance of 1648); and small tombs might be crowded into empty spaces between older large tombs (for example, 1616). Keeping this in mind, it may still be assumed that in general the small wood-roofed tombs in the older southern cemetery are older than those in the later northern cemetery. That this small wood-roofed type was, in spite of the prevalence of the corbel vault, still in use for poor graves in the period of the northern cemetery, is shown by the relation between N. 1616 and N. 1562<sup>2</sup> (see d. p. 10).

*Subsidiary  
graves*

To sum up, *the small wood-roofed type occurs during the whole period of the cemetery; but becomes less frequent in the later half of the period; and those examples of the type which*

*Duration  
of the  
small  
wood-  
roofed type*

<sup>1</sup> For details of the evidence see in each case the description of the tomb below.

<sup>2</sup> 1562 appears from the contents (stone vessels, pottery and seal cylinder) to be contemporaneous with 1605 one of the latest of the corbel vaults.



are subsidiary to the large tombs of the southern cemetery are probably older than those subsidiary to the large tombs of the northern cemetery. Without any pretence to finality, I have made an attempt to divide the tombs of this type chronologically as given below. The tombs contained so little pottery or other objects that we are forced to rely solely on the relative positions of the graves for their relative datings. Moreover, once the general conclusions on the duration of the type have been reached, this very paucity of material deprives the relative datings of the tombs of all importance,

- a. 1647, 1628, 1607 $\beta$ , 1634, 1525, 1643, 1531 $\beta$ , 1603, 1625, 1627;
- b. 1501, 1618, 1617, 1638, 1644;
- c. 1606, 1604, 1649, 1650, 1632;
- d. 1616, 1631, 1629, 1515 $\chi$ , 1642, 1541, 1637, 1641, 1529, 1620.

*Large wood-roofed type without a stairway, A. 1. b.*

The large wood-roofed tombs without stairway which are, as shown above, the oldest large tombs in the cemetery extend from the SW corner diagonally across the mound to the NE. It is difficult to determine the order in such a case, though one would expect the earlier tombs to be on the crest of the mound on well separated independent sites. The order may have been, judging from the positions: 1506 (on the crest of the slope), 1621, 1624, 1608, 1533, 1532. 1506 and 1533 contained the same types of pottery. On account of the small number of tombs, the order is of little importance.

*Large wood-roofed tombs with stairway, A. 2. b.*

It is immaterial which of the two tombs of the wood-roofed type with stairway is dated first. At the same time, without any very definite reason, I prefer to place 1512 before 1581.

*Large corbel vaults with stairway, B. 1. b.*

The map shows us at once a line of three tombs of the large corbel-vaulted type with stairway, running along the crest of the mound, — that is, occupying the primary sites. Of these the middle one, 1571, is probably the eldest, while 1515 and 1514 are later. Beyond 1515 there is no room for a large tomb on the mound, while south of 1514 the ground was already occupied. The next two tombs 1513 and 1586 are therefore in front of and behind 1571 respectively. The remaining three tombs, 1584, 1572 and 1605, are all smaller and manifestly built in among earlier tombs. N. 1584 cuts the stairway of 1514. N. 1572 occupies the stairway of 1571 and opens to the north, apparently to avoid 1513. The superstructure of 1571 must have been damaged in the building of 1572. (Whether we are to infer from that that the owner of 1572 was a relative of him of 1571 and rebuilt the superstructure of 1571, or whether 1571 was at the time of 1572 an abandoned tomb, it is not possible to decide.) And 1605 cutting the stair of 1572 must be later than that tomb and therefore later than 1571 and 1513. 1626 is clearly the latest corbel, being intruded into the southern cemetery, — at that time certainly abandoned, — after all the free sites in the northern cemetery had been occupied. The order of the large corbel vaults with stairway appears to be then: 1571, 1515, 1514, 1513, 1586, 1584, 1572, 1605 and 1626.



*Small corbel vaults with entrance, B. 1. a.*

These tombs appear to be entirely subsidiary to the large corbel vaults. They are situated in the spaces between these large tombs and on the extreme NE edge of the cemetery. One of them, 1648, is earlier than the late corbel 1605. Those which are situated between the large corbels are therefore probably nearly contemporaneous with while those on the outer edge are slightly later than the large corbels. That is, 1648, 1633, 1562, 1622 and 1630 (?) are perhaps earlier than 1611, 1612, 1613, 1614 and 1619.

*Small closed corbel vaults, B. 2. a.*

Only two of these can be recognized, 1623 and 1641, though 1523 $\beta$  may also belong to this type. Both these are probably contemporaneous with certain fourth dynasty tombs of cemetery 700 and are therefore not properly to be considered with the other tombs of 1500.

## 5. Theory of the development of the types.

All that which is concerned with any religious or funerary practice is protected by a certain conservatism; and this is especially true of those things which are considered essential to the validity of the practice in question. When therefore we find a thing like the substructure of a tomb, preserving its function of protecting the dead and the funerary furniture and yet changing its construction rapidly and radically, it is manifest that the *construction* of the substructure was not protected by any religious consideration. Its development must therefore in the first place have been based on practical and technical grounds and in the second place on imitation. The motives for the development were no doubt the desire for security to the burial and, as wealth and technical ability increased, the desire for larger and more ostentatious tombs. Thus it is that we *must look to the large tombs in order to get the main thread of the development*, for they are the tombs of those who most desire security and ostentation and are best able to secure the technical means of obtaining their desires. And when the small tombs are taken into consideration we must remember that they will as far as possible utilize the technical successes of the large tombs and copy their ostentation.

It is therefore in the largest of all tombs, the royal tombs, that we might expect to find the best material. The tombs B. 10, B. 15 and B. 19 at Abydos had about reached the practical limits, as to size, of the wood-roofed, single-chamber, mud-brick substructure. The tombs of Zet, Zer and Merneit obtain an increase in size by short cross walls which form small chambers around the inside, and brace the main walls as well as support the roof. Now it is clear that in our large tombs the cross walls of the end chambers are not really necessary, either to brace the main walls or to support the roof. Further the small doors in 1533 are not necessary to reach the chambers to which they lead while the marks indicating doors in 1506, 1621, 1624 are purely imitative (or symbolic, which, in this case, is the same thing). In other words these tombs contain unnecessary features copied from features of the royal tombs of Abydos which at that place have a technical *raison d'être*. If we remember that the site of Abydos is visible from our cemetery and that the builders of our tombs had in all probability seen and certainly had heard of the tombs of Zet, Zer and Merneit, it is impossible to escape the conclusion that type A.1.b, with its end chambers,



was built in imitation of those royal tombs. These additional chambers, having their origin in the solution of a structural difficulty, were immediately utilized as receptacles for pottery, stone vessels, offerings, etc. And in our cemetery, this secondary use of the end chambers had become fixed as their proper function. So we find end chambers retained in the stairway type with wood roof, A. 2.b, the stairway type with corbel roof, B. 2.b, and even at times in the small corbel, type B. 2.a, where finally the chambers had become merely rudimentary, in some cases hardly capable of taking a single pot (1611, 3022, 3014).

*Stairways*

The next step in advance is the introduction of the stairway. It does not require any reference to Abydos to show us the utility of that invention, though it was no doubt the tomb of Den in which the stairway was first used. The great difficulty of approaching and entering tombs like that of Merneit is obvious. The difficulty of construction was equally great. The excavation must have taken place by means of a construction slope or stair; and it may have been this construction slope which suggested the usefulness of a stair in the finished tomb. At any rate, the origin of the stairway must have been based on the difficulty of constructing and entering large tombs from above; and once originated it would be copied universally in large tombs, even though not so large as Merneit, on account of its utility. And it is clear that the stairway in our large tombs 1512 and 1581 and in the large corbel vaults fulfils a real function, that of giving convenient access to the burial chambers. It has however one other advantage in that it permitted the tomb to be roofed and made ready as far as the substructure was concerned before the burial was made. And that was of great advantage especially in the case of the corbel vault in preventing damage to the burial and the burial furniture during the roofing. Indeed it would have been difficult to finish these large corbel vaults at all without having access to the interior. In the case of the small corbel, however, the stairway or incline has no great value. They were made thus, simply because the corbel roof was copied from the large vaults in which the stairway corbel had now become the fashion; and the stairway was copied with it down to the wooden branches roofing the doorway.<sup>1</sup>

*The corbel vault*

So far, the thread and the cause of the development is fairly clear. But the next step the introduction of the corbel is, at first sight at any rate, more obscure. It must however be remembered that the wooden roof was in reality only the bearer, the support of a mud or mud-brick roof that in some cases (1532—1533) was at least ten to fourteen courses thick. It was apparently this solid mass of brick work which was relied on to protect the grave from rain, plundering, etc.; and the tendency to increase the thickness and stability of this protecting brick-work is seen in the introduction of wooden logs as a second roof higher up (1506, 1581). It is quite clear that in such a mass of brick-work an accidental corbel vault might in the most favorable circumstances be formed after seven or eight courses of the ordinary brick ca. 28×14×7 cm (30×15×7 cm), so that usually the wooden roof did not have to bear the whole weight of the mass above it. Yet wood rots faster than sun-dried mud-brick; and a mud-brick roof supported by wood is less stable and less enduring than a corbel. The corbels 1584

<sup>1</sup> When, in cemeteries 500, 700, 3200, the large stairway corbel had disappeared, we find the underground part of the *large* tomb was a chamber hollowed out of the solid rock or gravel far underground, often lined with brick-work, and closed with a huge block of stone, and the underground part of the *small* tomb was a deep pit lined below with mud-brick walls roofed with slabs of stone. The small imitative stairway corbel had disappeared along with the large stairway corbel.



and 1586 (being less exposed to the moisture of the overflow owing to their shallowness) are still tolerably preserved while no stick was found of a wooden roof which had any weight to bear. Therefore the corbel vault certainly gave greater security to the burial than the older wooden roof and was on that account universally adopted for large tombs.

The first use of the corbel vault discovered in Egypt is in the *large* tombs in cem. 1500. None of the small corbels, known anywhere, here, at el Amrah or at Reqaqnah,<sup>1</sup> can be dated so early as N. 1571, 1514 and 1515. The corbel vault was too clumsy, the make-weight required too much brick-work to make it a practical roof for a house, where merely shelter from sun and rain was required. This fact that the function of the house roof was merely protection against sun and rain, makes even the use of heavy brick-work supported by wood seem improbable. Personally I think the ordinary house roof at this period was a simple wooden roof, plastered with mud and supported, when necessary by wooden posts. The first evidence of the use of any other roof in buildings above ground is in the chapels of the mastabas of the Cheops cemetery at Gizeh (especially G. 1203) where the roof was the ordinary barrel-vault so common in the later periods both for houses and substructures. In brick-work, I know of nothing approaching a corbel in any building above ground in Egypt. And it *may* be that the use of the stairway in the large wood-roofed tombs led, by some mishap to the wooden roof, to the discovery of the accidental corbel in the brick-work above and suggested the use of the corbel vault alone as a practical roof. But the corbel may have been discovered in some very different way; and it is impossible to hope to reach definite conclusions in the case of the corbel vault any more than in the case of the true vault and the barrel vault.<sup>2</sup>

A question that at once suggests itself is where is the prototype of the corbel vault at Abydos. Considering the date of the corbel vault and its succession to the wood-roofed tomb with stairway, one would expect to find the corbel vault used in the tombs of Khasekhemui and Perabsen. And I am convinced that the corbel vault was actually used in the tomb of Khasekhemui. *The crushing of the walls due to moisture is perfectly typical of all our corbel vaults and occurs in none of our wood-roofed tombs* (see Petrie, R. T. II p. 11—12). Furthermore the decrease in the size of the chambers both in this tomb and in the tomb of Per-absen (Petrie, R. T. II p. 11, "row of small cells separated by cross walls like those of the early kings") is significant. The tombs as a whole show no decrease in size; the chambers are however smaller, — because, I believe, a different roof was used, a corbel vault, *in which size was sacrificed to security*. It is unfortunate for this question as well as for so many others that the Abydos site should have been delivered over to such incompetence as was manifested by Amelineau and to the rapacity of the speculators who financed him.<sup>3</sup>

Corbel  
vaults at  
Abydos

<sup>1</sup> The El Amrah tombs, b 137, b 178, see MacIver, *El-Amrah* p. 34, seem to be of the type B 2 a, as found in cem. 3000. At Reqaqnah (Garstang, *Third Egyptian Dynasty*) the closed corbels R. 56 and 67 are nearly contemporaneous with the Seneferu-group (61—64, 54): R. 68, 57, 58 and 72 are contemporaneous with the large 4<sup>th</sup> dynasty (or later) mastabas: the barrel-vaults R. 80 and 110 are still later (5<sup>th</sup> dynasty?).

<sup>2</sup> The true vault in brick-work is certainly used in the 4<sup>th</sup> dynasty and probably earlier but only in passages where the vault could be held up either by cohesion (according to Mr. Howard Carter) or by hand until the key-brick was in place. The barrel vault with its slanting courses secured the same thing,—i. e. the slanting courses supported themselves until the sides of the vault were so close together above that they could be supported by hand until the key-brick was in place and so permitted the arching of a wider space than the true vault built without a center (or frame).

<sup>3</sup> Much has been said of the violence of Petrie's language on this subject. But it is necessary that such work as Amelineau's should be properly characterized, by those who are competent to judge. And only an excavator can understand the bitter feelings of one who is a witness to such mad destruction of priceless material as Prof. Petrie saw at Abydos.



At any rate, the use of the corbel vault with stairway immediately succeeded that of the wood-roofed tomb with stairway in the Thinite community which buried its dead in our cemetery 1500, and indeed almost to the exclusion of all other types. Even the small wood-roofed tomb fell more and more into disuse and was replaced by a miniature copy of the large tombs (cf. especially 1611 and see above p. 12). At first the doorway of this small stairway corbel was roofed with wood like the large corbel; but after a time, the doorway even was covered with a corbel,—not in cem. 1500 but in the contemporaneous and immediately succeeding cem. 3000 (i. e. 3022, 3014, 3012).

## 6. The date of cemetery N. 1500.

When the cemetery was first discovered, the pottery, while distinctly different from the usual predynastic pottery known from Ballâs and to us from our excavations at Shurafa, el-Ahaiwah, and Ballâs (1 mile north of Petrie's cemetery) was seen to be similar to the pottery from later prehistoric graves<sup>1</sup> at el-Ahaiwah and Ballâs and to be identical with certain pottery then in the Museum from the excavations of de Morgan at Negada and Amelineau at Abydos.<sup>2</sup> There was, therefore, no hesitation in dating the cemetery to the first and second dynasty and to dividing it into two general periods: (1) that of the earlier wood-roofed tombs and, (2) that of the corbel vaults.<sup>3</sup> When I found time to go over the publications from Petrie's work at Abydos this general dating was confirmed; and it became possible to date our tombs more exactly. The wood-roofed tombs correspond in contents (see Description of tombs and corresponding photographs) and in substructure with the tombs of the kings of the first dynasty at Abydos. The corbel vaulted tombs are in immediate chronological succession to these and correspond in contents and probably also in substructure with the tombs of the kings of the second dynasty at Abydos. In the pottery of our cemetery there are certain types common to both groups of tombs and certain other types which occur only in the early group (Types I, II, XXII, XXIII, XXVIII, leaving out types which occur only in small graves). The evidence of the pottery at Abydos agrees with that of our pottery. The main type in which the difference between the pottery of the two periods is manifested is that shown on R. T. I pl. XXXIX, 1—7 and pl. XL, 8—12 (here, Pl. 54b, 33 and 56a, 1 and 2). This type does not occur at all in our corbel vaults and occurs in the tomb of Khasekhemui only in a degenerate form (R. T. II pl. VII, 31).

There cannot therefore be the least doubt that our tombs are to be dated as follows:

First dynasty (probably middle and late first dynasty):

Type A. 1.b. 1506, 1521, 1624, 1508, 1532, 1533. Synchronous with Zer, Zet, Merneit.

Type A. 2.b. 1512, 1581. Synchronous with Den, Azab, Mersekha, Qa.

Second dynasty:

Type B. 2.b. 1571, 1514, 1515, 1513, 1586, 1584, 1572, 1605, 1626.	} Synchronous with Perabsen, Khasekhemui, or somewhat later.
Type B. 2.a. 1611, 1612, 1613, 1614, 1562, 1619, 1648, 1622, 1630, 1633.	

<sup>1</sup> While not able to subscribe to the details of Petrie's sequence dating, there can be no doubt that a division of his sequence numbers into an early, a middle and a late period would show a reasonably close agreement with the facts

<sup>2</sup> I had not seen at that time Petrie's R. T. I which appeared I believe in the fall of 1900.

<sup>3</sup> See report in the *Archaeological Report* 1901.



## V. DESCRIPTION OF TOMBS.<sup>1</sup>

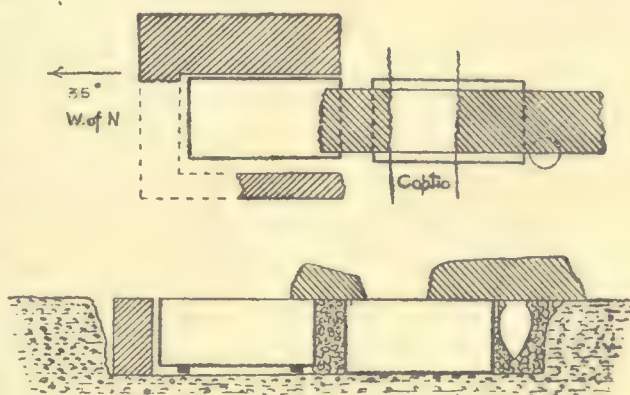
### 1. Unclassified tombs.

IN different parts of the cemetery, there were a number of small tombs which for one reason or another could not be assigned to any of the types described above. Most of these were box burials in wooden, pottery or mud coffins, two were under large boulders, two were in baskets and the rest were so plundered as to be indeterminable. Most of these belonged to the earlier part of the cemetery. In addition, the position of three of the wooden boxes under enclosing walls of large tombs and the pottery found in 1538<sup>a</sup> and 1602 seem to mark these burials as being for the most part as early as the wood-roofed tombs.<sup>2</sup>

#### *Wooden box burials.*

Underneath the enclosing wall of the superstructure of 1506 were found two graves (1538, 1538<sup>a</sup>) of a peculiar type which were manifestly either older than 1506 or contemporaneous with it. Under the enclosing wall of 1514 was found a similar grave (1582). A fourth grave of the same type was found further north (1531<sup>a</sup>).

**N. 1538.** Partly under the west enclosing wall of N. 1506 was found a wooden box containing only a few scattered bones. The wall of 1506 (marked in fig. 1 by ▨ shading) rested on the top of the coffin. The box was ca. 42 cm high so that the level of the receptacle was only about 45 cm below the ancient surface. The receptacle was formed by a thick wall (1½ bricks, 40 cm thick) on the east, bonded with the remains of a thinner wall (1 brick thick) on the north. On the west were the remains of a wall ¼ brick thick. There was no south wall; but 20 cm south of the inside of the south end was the north end of 1538<sup>a</sup>.



*Burials  
in wooden  
boxes.*

The wooden box, measuring 102 × 58 × 42 (high) cm, was made of boards 2½ cm thick and covered outside at least, with pink plaster. The manner of joining at the corners was not clear. The boards of the bottom were held together by two cleats 5 × 2 cm in section, placed cross-wise about 8 cm from each end (pegged on?).

Outside the coffin on the east side, were found 5 flint-core marbles and a small flint (Pl. 40<sup>b</sup>).

**N. 1538<sup>a</sup>.** An exactly similar burial except that there were no brick walls around the box. The box was plundered, as above, and filled with dirt. The enclosing wall of 1506 *rested on* this dirt-filled box nearly the whole length of the box (Pl. 14<sup>d</sup>). The plastering of the wall of 1506 reached out for ca. 2—5 cm on both sides, resting on dirt, so that it was impossible for the box to have been shoved under the wall. The skeleton had, like 1538, been badly disturbed.

The box was like that of 1538, measuring 100 × 58 × ca. 60 (high).

<sup>1</sup> In the plans, the double barbed arrow ← marks the direction, magnetic north in the winter of 1901—2 unless otherwise stated. The single barbed arrow ← marks the direction of the photograph whose plate number is written on the shaft. Solid black represents wood, shaded parts, brick-work.

<sup>2</sup> N. 1585 a pottery coffin roofed with stone was later, see *Index of Tombs*.

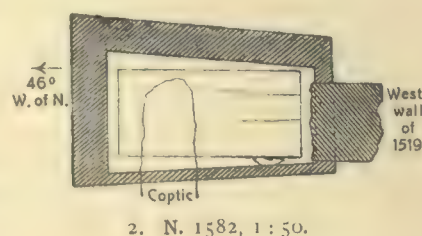


At the north end was found a pot (type v 3) of the ordinary coarse red ware, smoothed about the lip, finger marked on the body.

**N. 1582.** An exactly similar burial under the west enclosing wall of 1514 (Pl. 17<sup>a</sup>). Enclosed by a bonded wall, 1 brick thick on east and north,  $\frac{1}{2}$  brick thick on south. On the west side, the wall was built of bricks on edge, plastered.

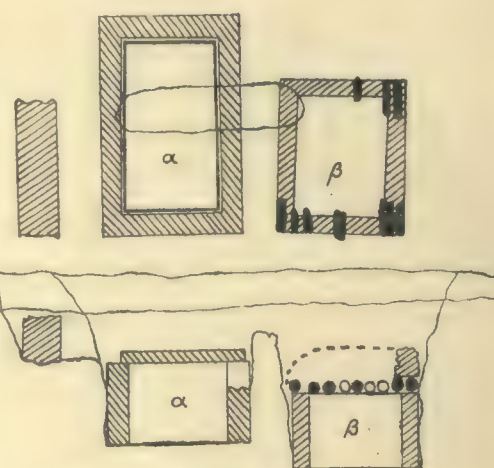
The box was like that of 1538, measuring  $120 \times 58 \times$  ca. 50 high. The bottom was of threeboards, ca. 4 cm thick, with cleats.

In the SW corner was found a skull and a cylindrical alabaster jar, type S 1 d. Outside the coffin on the west side were (Pl. 14<sup>b</sup>) found fragments of an alabaster bowl (type S xviii) and a few small animal bones (kid?). On the east side, shoved under the wall were other small animal bones (kid?).



2. N. 1582, 1:50.

**N. 1531.** A rectangular well of mud brick containing a wooden coffin situated between an unexplained bit of wall and 1531 $\beta$ , which was an ordinary small wood-roofed grave. Axis  $48^\circ$  east of south. N. 1531 $\alpha$  was completely plundered like 1538 and 1582, but 1531 $\beta$  was only plundered slightly around the head. The walls of the well of 1531 $\alpha$  are  $\frac{1}{4}$  brick thick all stretchers bonded at corners, and fit the box tightly as if built around the box. The top of the wall shows print of reed matting and some remains, proving that the box and walls were covered by a mat. On top of mat on the north end was one course of bricks.

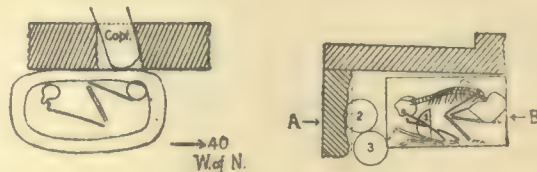


3. N. 1531, plan and section, 1:50.

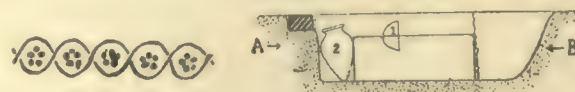
The wooden box measured  $115 \times 65 \times 55$  (high) cm, made of boards 2 cm thick. *The sides overlap the ends.*

### Basket burials.

**N. 1635.** Next to an unexplained wall (cf. 1538), possibly connected with superstructure of 1532 or 1512, was a basket plastered inside and out with mud. This basket contained a left arm, left pelvis and left femur of a skeleton which was in a contracted position on the left side with the head north. It also contained a small pot of dull red-polished brown ware (see Pl. 17<sup>e</sup>). The basket was made of bunches of 4 or 5 fibres woven together by two fibres passing over and under (see fig. 4<sup>d</sup>).



**N. 1636.** About one meter north of 1635, was a mud box (1636 $\beta$ ). In front of this mud box, nearly on a level with its bottom, were fragments of a mat, the end



4 a—d. N. 1635 and 1636, plan. N. 1636, section, 1:50.

of a radius and one toe bone. Under it was a mass of organic matter (bread?). Above in the dirt was a fragment of a coarse mud pan (type xxix). The mat consisted of bundles of fibres bound together by two fibre-twines passing over and under, like fig. 4<sup>d</sup>. The twine consisted of two strand loosely twisted: each strand consisted of 3—5 fibres twisted together.



*Mud box burials.<sup>1</sup>*

**N. 1636 $\beta$ .** The mud box referred to under 1636 $\alpha$ , was placed longside an earlier(?) wall. On the south was a fragment of a contemporaneous(?) wall. Axis of box points 40° west of north.

The box contained a skeleton (middle-aged male?) in a contracted position on the left side, head to the north (Pl. 17<sup>b</sup>).

On the skeleton was (1) a bowl of brown pottery, red painted, line polished in part with vertical lines and in part with horizontal lines (type xxiv<sup>b</sup>). At the south end of the box, were two pots (type v).

**N. 1646.** A mud box alongside a wall sunk beneath the surface. This wall seems similar to the wall alongside 1538. The box was in a hole under the line of the superstructure wall of 1514 but the superstructure had been cut away. The axis of the box points 44° east of north,— i. e. parallel to the superstructure wall of 1514.

The box contained a disturbed skeleton (Pl. 16<sup>d</sup>) contracted on the left side, head to the east. At the southeastern corner of the box was a rough pot (type v).

**N. 1525. 1.** Mud box intruded into 1525, q. v.

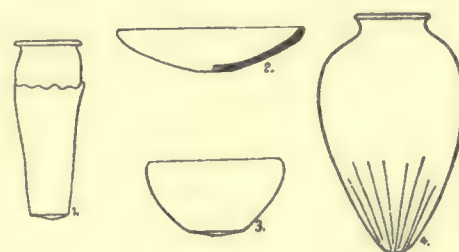
**N. 1536.** Fragment of a mud box just under the present surface containing upper part of a contracted burial on the left side head east. The corner of a well was also preserved, walls 12 cm wide, all stretchers, to a length of 80 cm on south side and 25 cm on east end. Axis 45° east of north (i. e. local east). Broken by a Coptic burial. See Pl. 18<sup>b</sup>.

Just south of the Coptic burial and belonging to 1536 was a water-worn alabaster (Pl. 18<sup>b</sup>).

**N. 1602.** A mud box burial wedged in among the boulders on the extreme eastern edge of the hill where it turns NE to form the wady (see Map and Pl. 17<sup>d</sup>). The box is scarcely under the present surface.

It was made of unbaked Nile mud, was 82 cm long by 54 wide (height indeterminable) and had walls 2 cm thick.

The skeleton was contracted but disturbed and decayed. In the coffin was the cylindrical jar no. 1: the others were outside, Pl. 53<sup>a</sup>.



5. N. 1602, pottery, 1 : 10.

1. Hard pink ware containing mud and ashes, type xviii.
2. Brown ware painted red but faded(?) to a salmon pink, line polished, type xxiv.
3. Red ware, painted red, line polished, type xxiv.
- 4—6. Coarse red ware, black center, smoothed wet around mouth, vertical scratches on base, type v. Remains of mud in 4 and 5. Mud seal on mouth of 5.

*Other burials.<sup>1</sup>*

There were eight burials in which no trace of a coffin was found.

**N. 1535.** Just under the present surface (i. e. ca. 40 cm below) was the upper half of a contracted skeleton on right side, head to local south (Pl. 18<sup>a</sup>). The outline of the pit had been destroyed. The legs of a Coptic burial lay across the place where the waist of the older skeleton had been.

<sup>1</sup> The pottery coffins with the exception of 1585 were found in tombs of the regular types, see 1525, 1623 and 1640. N. 1585 was a grave of a later type.



In the dirt beside the burial were:

- N. 1592. 1. A slate bowl, type S XVIII, see Pl. 50<sup>c</sup>. 2. An alabaster jar, type S III<sup>a</sup>, see Pl. 50<sup>c</sup>. Just under the present surface (i. e. 10 cm below) were the disturbed leg bones with a few vertebrae of a skeleton which was apparently contracted on left side, head to the local south (Pl. 23<sup>c</sup>).

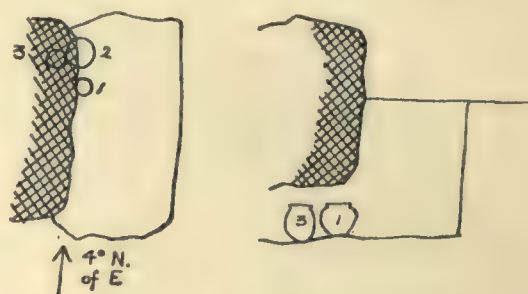
In the dirt just above were two slate bracelets (Pl. 41<sup>b</sup>).

- N. 1645. Outside the enclosing wall of 1514 and parallel to it ca. 100 cm deep was a skeleton contracted on left side head to the local east (Pl. 18<sup>d</sup>). The sides of the pit were not clearly marked in the debris; but in the middle of the south side was an irregular mass of brickwork, ca. 80 × 50 cm and 50 high. At the foot and manifestly belonging to the burial were two pots (one type v; the other type iv of light greenish material). In the dirt was a fragment of alabaster (type S VIII).

- N. 1591. In the debris of a small pit, which had been broken by *sebbahin* or plunderers, were found a few fragments of bones and a small well worn seal cylinder of grey stone (see Pl. 43).

- N. 1522. Under a large stone were three pots; but no trace of a burial was found (Fig. 6 and 7).

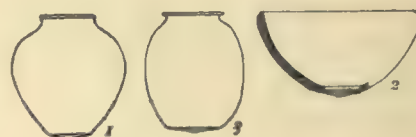
1. Coarse pink ware, Pl. 53<sup>a</sup>.
2. Brown ware, red painted, line polished, Pl. 53<sup>a</sup>.
3. Brown ware, red painted, dull polish, Pl. 53<sup>a</sup>.



6. N. 1522, plan and section, 1 : 50.

- N. 1521. In the surface debris were:

1. Cylindrical jar, coarse pink ware, red painted, Pl. 53<sup>a</sup>.
2. Fragment of red painted, line polished bowl, Pl. 53<sup>a</sup>.



7. N. 1522, pottery, 1 : 10.

- N. 1652. Contracted burial on left side, see Map.

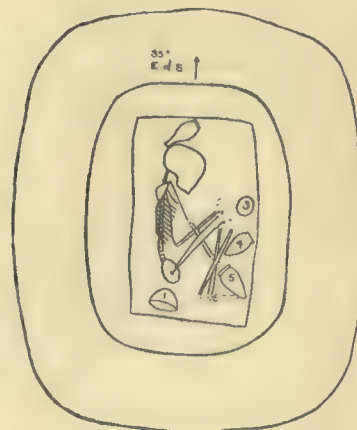
- N. 1653. Contracted burial on left side, see Map. Near surface.

## 2. Wood-roofed tombs with single chamber, type A. 1. a.

### Group a.

This group of tombs appears to be older than the other tombs of the same type, (1) because they are in the older part of the cemetery, (2) because they are oriented like the large wood-roofed tombs and partly also (3) because of their contents. The first tomb to be described is 1647, on account of its good state of preservation, and because it is probably, judging by its burial and its pottery, the oldest of the tombs in this group. There is no other tomb in the cemetery exactly like it.

- N. 1647. An irregular oval pit, axis 35° west of north, 350 cm deep, Pl. 15<sup>a</sup>, b. Plastered inside with 2½ cm of mud laid on the gravel wall. At 235 cm from the bottom of the pit, a roof consisting of natural branches (or saplings) rested on the gravel stratum. These branches were covered with mud brick and plaster. The branches were rotten. The roof as actually observed at west side of north end was like fig. 10<sup>a</sup>, and was apparently built like Fig. 10<sup>b</sup>.



8. N. 1647, plan, 1 : 50.



The burial was contracted on left side, head to the south. The right arm was extended with forearm between the legs; left arm bent, with hand at knee. The burial was in a wooden box, the boards of which were ca. 1½ cm thick.

When the pit was opened, the roofing logs were found hanging down the sides of the pit as if the roof had given way naturally from the weight of sand above and let down sand and gravel into the pit. This is sufficient to account for the crushing of the coffin and upsetting of the pots. In addition the upper part of the south end was cut across by a Coptic burial to within 100 cm of the floor.

The pit contained five pots, see Fig. 11:

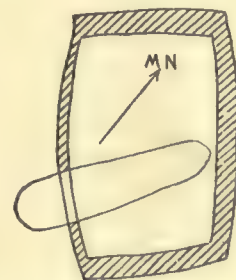
1. A bowl of soft red ware, painted and line polished. The polishing lines are horizontal on edge inside and out. On the bottom they run across from side to side.
2. A jar of hard fine red ware with dull red polish. The lines are horizontal on shoulder and neck and vertical on body.
- 3.—5. Three jars of coarse red ware with finger marks inside. They contain small cake of mud in bottom (as if mud had been brought in them for plastering and all except a small remainder scooped out with the hand).

**N. 1628.** Irregular grave with curving sides, cut in the alluvial strata with the axis pointing about 38° east of south. The sand stratum is lined on three sides with a brick wall, ¼ brick thick, on the west side however with a wall consisting of bricks on edge (¼ brick thick). Plastered inside and *on top of walls*. Roof therefore probably like 1647.

Completely plundered. Cut by a Coptic burial on west side.

In the lower deposit of dirt were found the following pots:

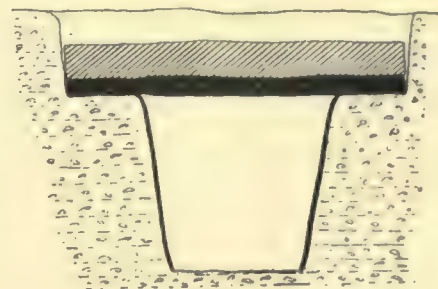
1. A jar of brown ware, smoothed, painted red (i. e. imitation hard pink ware of late prehistoric period).
2. A bowl of burnt mud.
3. A fragment of waterworn alabaster, type SVII or VIII.



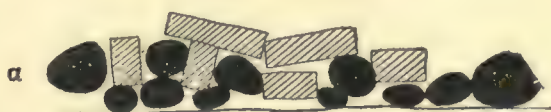
12. N. 1628, plan, 1 : 50.



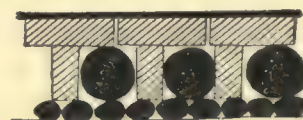
11. N. 1647, pottery, 1 : 10.



9. N. 1647, section, 1 : 50.



b



10. N. 1647, section of roof.



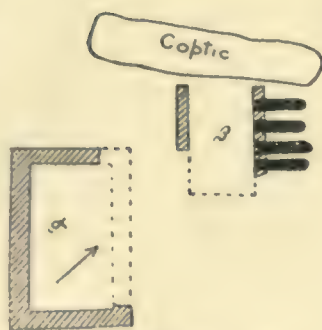
13. N. 1628, pottery, 1 : 10.

**N. 1607β.** A small grave cut in the alluvial strata to a depth of ca. 100 cm. below the old surface with the axis pointing about 45° east of south, Pl. 14<sup>f</sup> and Fig. 14, 15. The lower part is lined with a wall, ¼ brick thick (i. e. bricks on edge). Of the roof traces remain of wooden logs

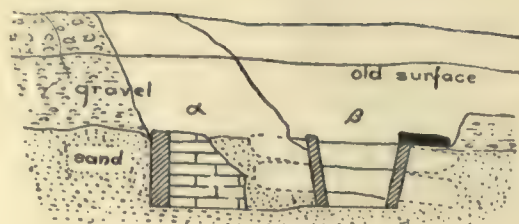


laid across the top of the lining and resting on the hard *gebel*. Plastered on inside and top of walls.

Completely plundered. North end cut by two Copts, one on top of the other. South end also cut by Coptic burial.



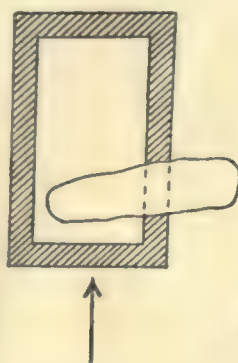
14. N. 1607, plan, 1 : 50.



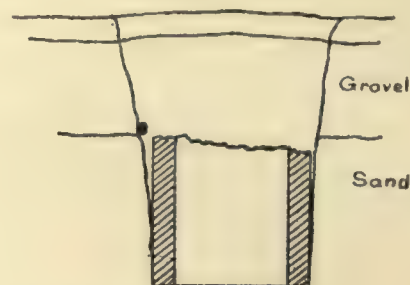
15. N. 1607, section, 1 : 50.

N. 1634.

For 1607a see below. A rectangular pit axis ca.  $46^\circ$  west of north. About 180 cm deep, lined to height of ca. 100 cm with a mud brick wall,  $\frac{1}{2}$  brick wide, all stretchers (except one header at NW corner to even out a course). Plastered with mud inside and on top of walls.



16. N. 1634, cross section, 1 : 50.



Completely plundered. Crossed by four Coptic burials one of which cuts through east wall.

In the debris of the pit, near the bottom were found:

1. Ten black cylindrical heads like Pl. 42 second string.
2. Bowl of brown ware, red painted, line polished, Fig. 17.

N. 1525.

A nearly rectangular grave cut in the alluvial strata to a depth of 170 cm with the axis pointing  $20^\circ$  south of east, Pl. 16<sup>a</sup>, b, c<sup>1</sup>. The sand stratum to a height of 125 cm is lined with a brick wall  $\frac{1}{2}$  brick thick, plastered inside. The top of the lining has been destroyed as well as the surface above. But the roof was probably like 1647. There is no evidence on superstructure.

The grave filled with dirt and sand, contained two coffins, see Plate 16<sup>a</sup><sup>1</sup>.

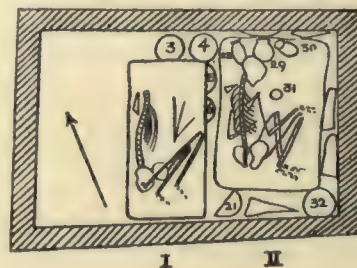
Coffin I was of unbaked Nile mud and rested partly on II and partly on debris in the bottom of the grave.

In this debris, were pots belonging to Coffin II apparently in position. Therefore Coffin I is an intrusive burial, which was placed in a hole dug in an older grave and then covered with dirt.

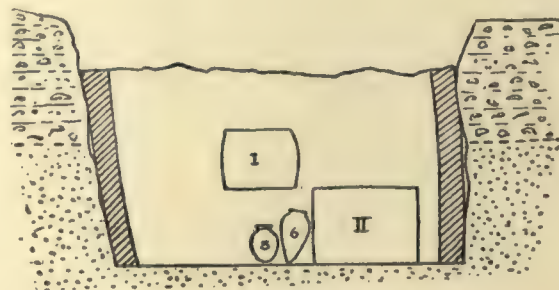
The lid of box I was missing, the box was filled with dirt and contained a plundered skeleton on the left side with head to the north,  $20^\circ$  east, see Plate 16<sup>a</sup><sup>1</sup>.



17. N. 1634, pottery bowl, 1 : 10.



18. N. 1525, plan, 1 : 50.



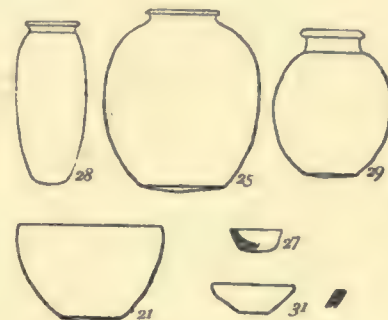
19. N. 1525, section, 1 : 50.

<sup>1</sup> Pl. 16<sup>a</sup> was unfortunately reversed in the reproduction.



Box II is of red pottery. The lid was moved to one side and broken; and the box was filled with dirt like the rest of the grave. Flat limestone chips were wedged between the box and the brick lining of the grave. The skeleton was contracted (the break in the spinal column seen in Plate 16<sup>c</sup>, was made by me to show the position of the left arm), on the left side with the head to the north, 20° east. The pottery found in the grave is represented on Plate 54<sup>a</sup>.

1. Bowls of red polished ware, vertical lines inside, type xxiv (Pl. 54 above 29).
2. Bowl of red polished ware, type xxiv (Pl. 54 above 30).
3. Jar of smooth red painted ware, type ix (Pl. 54 between 24 and 25).
- 4—6. Jars of smooth red painted ware, type iv (Pl. 54 between 23 and 32).
- 7—20. Not used.
21. Bowl of red polished brown ware, horizontal lines on inside and on rim, type xxiv.
- 22—24. Jars of red painted brown ware, type v.
- 25, 29. Jars of smooth red painted light brown ware, type ix.
26. Bowl of coarse red ware, with trimming marks on bottom, type xxx<sup>b</sup>.
27. Saucer of coarse, burnt mud, type xxix.
- 28, 30. Jars of smooth, light brown ware, type x.
29. See 25.
30. See 28.
31. Saucer of yellow limestone.
32. Jar of smooth light brown ware, type ix.
33. Saucer of coarse brown ware, type xxx<sup>a</sup> (Pl. 54 beside 27).



20. N. 1525, pottery, 1 : 10.

Nos. 1 and 2 were on coffin II; 3—6, 21 and 32 were in position beside it; and 28—31 were in the coffin itself. All these therefore belong to coffin II. Nos. 26, 27 were in the dirt under I; and 22—25 and 33 were in the dirt above the coffins.

N. 1643.

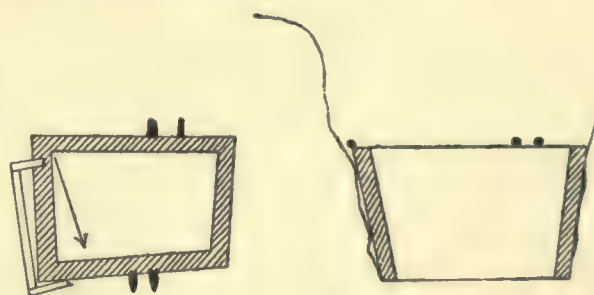
A slightly irregular grave cut in the alluvial strata with the axis pointing about 18° south of west. The lower part, in sand strata, is lined with a brick wall ( $\frac{1}{4}$  brick thick) consisting entirely of stretchers one course overlapping the other and plastered on the inside and top. Of the roof, there are traces, ends of saplings which had been laid across the top of the brick lining and, on the south end, part of a jointed frame, see

Plate 13<sup>c</sup>. The surface has been denuded, so that evidence as to superstructure is wanting.

The grave had been completely plundered. It lies near the surface in the part of the cemetery dug over by *sebbahin*.

N. 1531 $\beta$ .

Similar to 1634 and nearly square. Axis points 42° east of south. Walls  $\frac{1}{4}$  brick thick, stretchers on edge. Plastered inside and on top of walls. Remains of at least 6 saplings 5—8 cm in diameter laid *lengthwise* across top of walls. Above logs on north end, are remains of a mud brick roof. See 1531<sup>a</sup> (Fig. 3), above.



21. N. 1643, plan and section, 1 : 50.



Skeleton on left side head to the north,  $42^\circ$  west, epiphyses not joined. Skull missing. At neck scattered black and white cylindrical beads from necklace, see Pl. 42, 2.

- N. 1603. Similar to 1634. Axis  $45^\circ$  west of north. Depth ca. 155 below old surface. Height of walls ca. 60. Crossed by three Copts. Completely plundered.

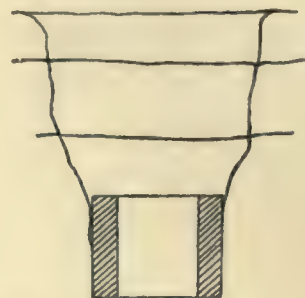
In the dirt were found: a large number of disc beads of grey stone and white shell, a univalve (cosmetic?) shell and one large shell(?) bead, see Pl. 42, 4.

- N. 1625. Similar to 1634. Axis  $43^\circ$  west of north. Depth ca. 100 below present surface. Height of walls ca. 40 cm. Walls consist of 3 stretcher courses of bricks on edge. Ends of three logs of roof preserved. Completely plundered.

- N. 1627. A small tomb very similar to 1625. Completely plundered.



22. N. 1603, cross section, 1:50.



23. N. 1625, cross section, 1:50.

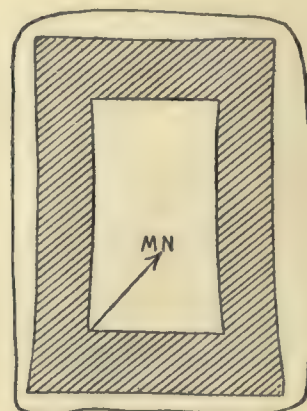
*Wood-roofed tombs with a single chamber, type A.1.a.*

*Group b.*

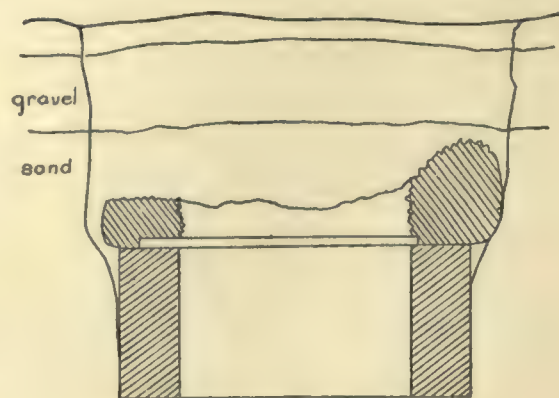
- N. 1501. Nearly rectangular grave, cut in alluvial strata with the axis pointing  $42^\circ$  east of south, Pl. 13<sup>d</sup>. The lower part is enclosed by perpendicular mud bricks walls, 1 brick thick, bulging inwards at the side, owing to pressure of sand behind, and plastered inside and on top of walls. Around the top of the wall are the remains of a brick mass, at least five courses high, *broken on the inside*. On the sides, this brick mass is separated from the top of the wall by wood rot; on the ends the wood rot extends in from the inside only  $2\frac{1}{2}$  cm on the south and  $\frac{1}{2}$  cm on the north. Therefore there was a wooden roof of boards or branches laid *across* the well and covered by at least five courses of brick. Such a mass laid in the ordinary manner would form with the fourth course a more or less perfect corbel vault so that the wood roof would only bear the full weight of six bricks and the partial weight of six or seven more. There is room for eight courses between the top of the wall and the old surface. There was no trace of superstructure; but the surface was much disturbed.

The grave was plundered. In the dirt was found: a small bore black seal cylinder (Plate 43), a fragment of alabaster bowl (type Sxvii), a fragment of an alabaster cylindrical jar, some black and white cylindrical beads (Pl. 42, 3) and fragment of red, line polished bowl (type xxiv).

- N. 1618. Similar to 1501. Axis  $45^\circ$  east of south. Walls  $\frac{1}{2}$  brick thick, stretchers with one course of headers



24. N. 1501, plan, 1:50.



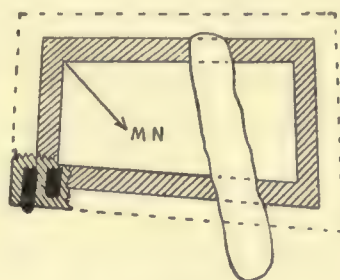
25. N. 1501, long section, 1:50.



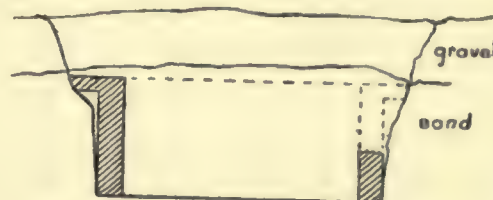
on top of wall. Plastered inside and on top of walls. Ends of two saplings of roof on north east corner of wall. Plundered.

- N. 1617.** Similar to 1501. Walls  $\frac{1}{2}$  brick thick, all stretchers. Top of wall plastered. Part of mud roof preserved on north end. Axis points  $39^\circ$  east of south.

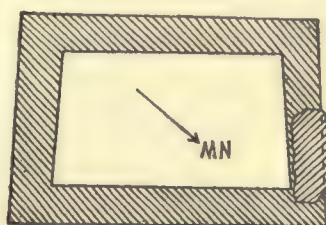
Completely plundered. In the dirt a bit of a shallow alabaster bowl. In the plaster a bit of a red pebble-polished bowl of brown ware.



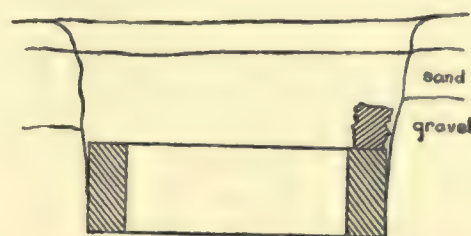
26. N. 1618, plan, 1:50.



27. N. 1618, section, 1:50.

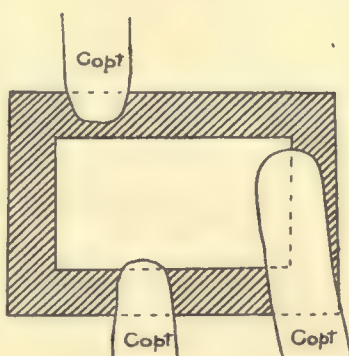


28. N. 1617, plan, 1:50.

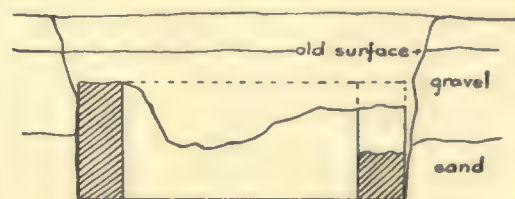


29. N. 1617, section, 1:50.

- N. 1638.** Similar to 1501. Axis  $42^\circ$  west of north. Depth ca. 125 below present surface (ca. 100 below an older surface, not ancient). Height of walls ca. 80. Walls, 1 brick wide double stretcher courses with a header course about every third course. Cut by three Copt. Completely plundered.



30. N. 1638, plan, 1:50.



31. N. 1638, long section, 1:50.

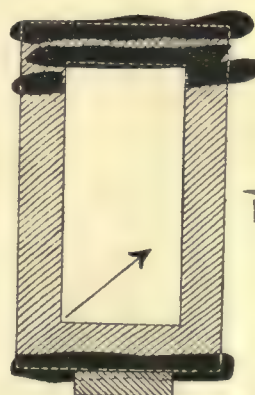
- N. 1644.** Similar to 1501. Axis points  $50^\circ$  east of north (or  $50^\circ$  west of south). Below, the walls are  $\frac{1}{2}$  brick thick; above, 1 brick thick. Plastered inside and on top of wall.

### *Wood-roofed tombs with a single chamber, type A.1.a.*

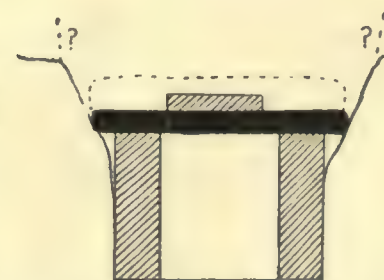
#### *Group c.*

The tombs of group c are substantially of the same construction as the tombs of group b; but they are probably subsequent in date because they are in the later part of the cemetery and oriented like the large tombs near by. N. 1606 may be taken as the best example of the group.

- N. 1606.** Rectangular grave cut in alluvial strata, with the axis pointing  $50^\circ$  east of south. The lower part is enclosed by a perpendi-



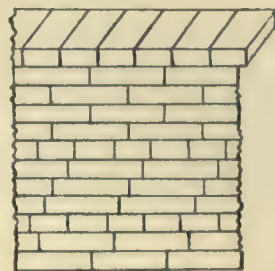
32. N. 1606, plan, 1:50.



33. N. 1606, cross section, 1:50.



cular well with walls 1 brick thick, plastered inside and on top. The wall is built of overlapping stretcher courses (two bricks laid side by side) with an occasional header course. On the east side, courses 1, 6 and 10 are headers while courses 2, 3, 4, 5, 7, 8, 9, 11 and 12 are stretchers, see Pl. 12<sup>b</sup> and Fig. 34. The roof consisted of at least twelve saplings or limbs laid across the tops of the walls and extending about 15 cm beyond them, see Pl. 12<sup>a</sup>. The saplings vary from 10 to 18 cm in diameter. On the south end were traces of *brick work above the logs*, partly covered by a Coptic burial. On the west side, at a height of ca. 30 cm above the wood was a bit of rough brick-work, cf. 1501.



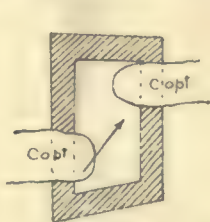
34. N. 1606, brickwork.

The skeleton was crushed by fall of roof and decayed but was certainly contracted, on left side, head to the south. North of the skeleton upside down on the floor was an alabaster bowl, type S xvii<sup>b</sup>, height 8.5 cm, diameter 18 cm. In the dirt were two pots of fine light red ware, type x, see Pl. 54<sup>b</sup> and cf. N. 1525.

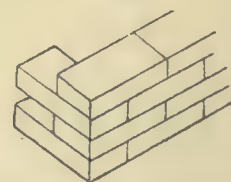
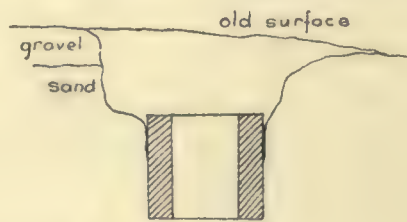
**N. 1604.** Similar to 1606. Axis points 37° east of south. Walls 1/2 brick thick, all stretchers, overlapping. Plastered inside and on top of wall. See Pl. 14<sup>a</sup>. The brickwork was unusually regular.

Two Coptic burials were partly over the walls but did not cut them.

Burial, part of back bone and ribs of young skeleton clearly contracted on left side, head



35. N. 1604, plan and cross section, 1:50.



36. N. 1604, brickwork.

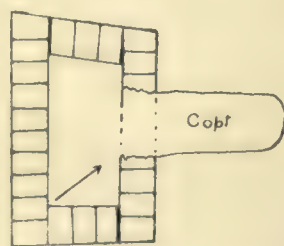
to local south. Bones crushed (by fall of roof) and decayed. At the neck were blue glaze, carnelian and green stone beads (see Pl. 41<sup>a</sup>) and a small bore black seal-cylinder (see Pl. 43).

**N. 1649.** Similar to 1606. Axis points ca. 37° east of south. Walls 1/2 brick thick all stretchers overlapping. Plastered inside and on top of walls. Empty.

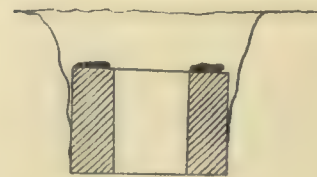
**N. 1650.** Similar to 1606. Piece of alabaster jar (type S iv<sup>1</sup>?) was on south wall. In pit were fragments of rotten wood (roof?) and a few badly disturbed bones, see Pl. .

**N. 1632.** Similar to 1606. Axis points 52° east of south. Walls one brick thick, top course headers; plastered inside and on top of walls. Traces of logs on top of walls. Plundered.

**N. 1607<sup>a</sup>.** Similar to 1606. Axis 47° east of south. See Figs. 14 and 15. Walls 1/2 brick thick, all stretchers. Plastered inside and on top of walls. In the dirt, an alabaster jar of type S iii and some Coptic glass beads.



37. N. 1632, plan and section, 1:50.



### *Wood-roofed tombs with a single chamber, type A. 1. a.*

#### *Group d.*

The tombs of this group differ from those above in orientation (1616, 1631, 1629, 1651) and in situation (1642, 1541, 1637, 1641, 1529, 1620).

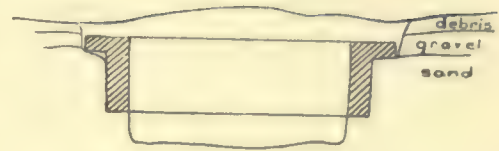


**N. 1616.** Similar to 1606 but with the axis pointing  $32^\circ$  east of north (or  $32^\circ$  west of south). The walls are  $\frac{1}{2}$  brick thick, stretcher courses except the top course which is composed of headers, doubling the width of the wall at the top. Plastered inside and on top of walls. Traces of wood on south end. Surface denuded to within 20 cm of top of walls.

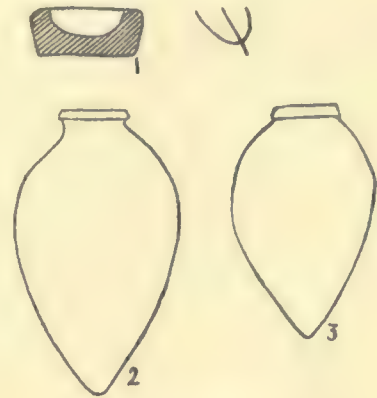
The northwestern corner of the well cuts into the side of the doorway and the door-block of 1562, see 1562 and Pl. 39<sup>d</sup>.

Resting on the floor were the pots in Pl. Lb:

1. Rough dish of coarse brown ware (mud). Mark inside, see fig. 39.
2. Jar of red painted brown ware.
3. Jar of red-painted brown ware.



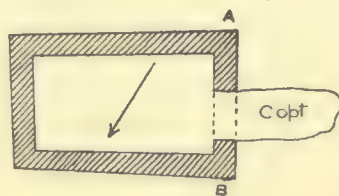
38. N. 1616, long section, 1:50.



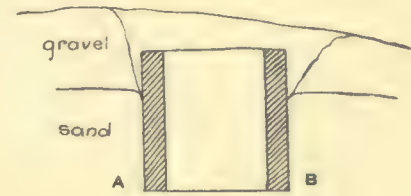
39. N. 1616, pottery, 1:10.

**N. 1631.** Similar. Axis points  $32^\circ$  east of north (or  $32^\circ$  west of south). Walls  $\frac{1}{2}$  brick, all stretchers. Plastered.

**N. 1629.** Similar to 1606. Axis points  $45^\circ$  east of north ( $45^\circ$  west of south) walls  $\frac{1}{2}$  brick thick, all stretchers. Marks of fallen saplings on north side and ends of 4 saplings preserved on top of walls. Plastered inside and on top of walls. In corner in position, a jar of smooth pink-ware, type iv.



40. N. 1631, plan and cross section, 1:50.

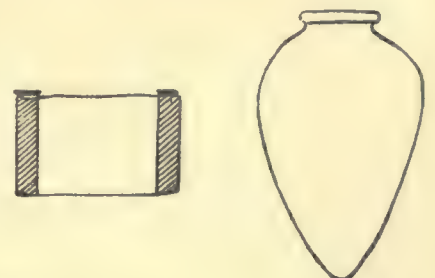


**N. 1651.** Similar to 1606. Almost entirely destroyed by *sebbahin*.

**N. 1642.** Similar to 1501. Axis points  $34^\circ$  east of south. Walls  $\frac{1}{2}$  brick thick. Plastered inside and on top of walls. At the ends, remains of roof consisting of saplings covered with heavy mud plaster. Plundered; and cut by two Coptic burials.

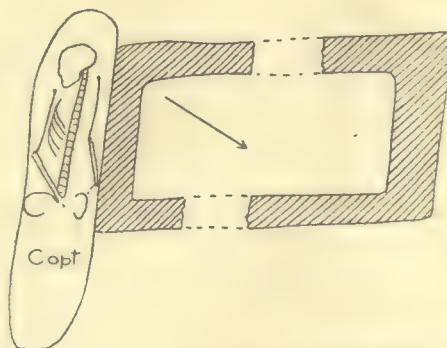


41. N. 1629, plan and cross section, 1:50.

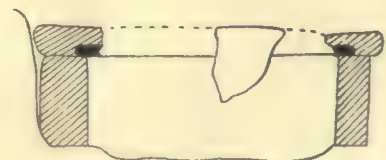


42. N. 1629, pot.

**N. 1541.** Similar to 1501. Axis points  $28^\circ$  east of south. Walls  $\frac{1}{2}$  brick thick, all stretchers. Plastered inside and on top of walls. At



43. N. 1642, long section and plan, 1:50.





the northeastern corner are traces of wooden roof. Cut by Coptic burial. Completely plundered. The old surface and the walls have been cut away, slanting from top of north wall to half way down the south wall, by the action of the river, cf. 1534 and 1637.

**N. 1637.** Similar to 1501. Axis points  $57^\circ$  east of south. Walls  $\frac{1}{2}$  brick thick, all stretchers except top course which is composed of headers. Plastered inside and on top of wall (west side). Traces of logs covered with mud on top of the west wall.

Cut away by river similar to 1541.

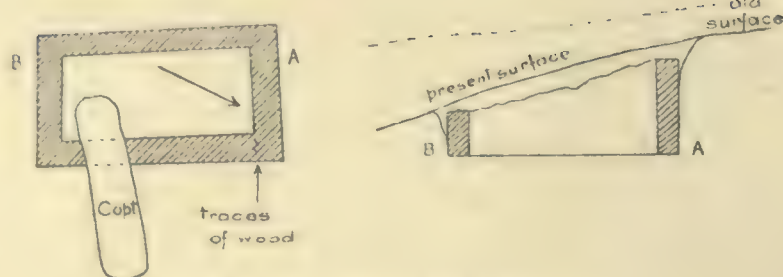
**N. 1641.** Similar to 1501. Axis points  $22^\circ$  east of south. Wall  $\frac{1}{2}$  brick thick. Plastered inside. Surface denuded. Plundered.

**N. 1529.** Similar to 1501 but nearly square. Axis points  $49^\circ$  west of north. Walls  $\frac{1}{2}$  brick thick. Plastered inside. Trace of mud of roof on north side about 50 cm above top of wall.

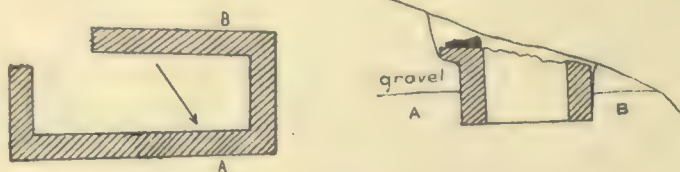
In dirt at the north end just above floor (see Pl. 23<sup>d</sup>) were found fragments of human bones and the following objects:

1. Limestone cup, diameter 9 cm, height 6 cm.
2. Alabaster bowl, piece missing, diameter 25 cm, height 8 cm.
3. Jar of fine pink ware, diam. 8 cm, height 15,5 cm, Pl. 54<sup>b</sup>.
4. Jar of fine pink ware, diameter 10 cm, height 27 cm, Pl. 54<sup>b</sup>.

**N. 1620.** Similar to 1501. Axis points  $47^\circ$  east of south. Walls  $\frac{1}{2}$  brick thick. Plastered inside and top of wall. Plundered. Cut by two Coptic graves.



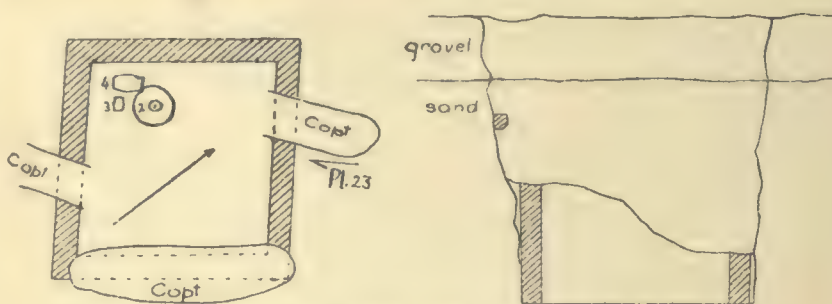
44. N. 1541, plan and long section, 1:50.



45. N. 1637, cross section at B—A and plan, 1:50.



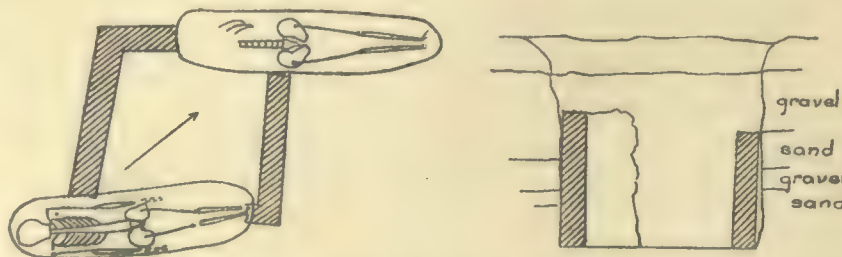
46. N. 1641, plan and long section, 1:50.



47. N. 1529, Plan and cross section, 1:50.



48. N. 1529, stone vessels and pottery, 1:10.



49. N. 1620, plan and cross section, 1:50.



### 3. Large tombs with end chambers and wooden roof (no stairway), type A. 1. b.

The tombs of this type are 1533, 1532, 1608, 1624, 1621 and 1506. The best preserved *Chambers* examples are 1533 and 1506. From these we find a pit cut in alluvial strata and lined to about half way up with a mud brick substructure which contains five compartments (1624 three compartments),—a main central chamber and two minor chambers at each end. These end chambers are in 1533 connected with the main chamber by small doors. In the other tombs, these doors are merely indicated by lines drawn in the plaster. In both cases, we have probably merely an imitation of larger tombs in which doorways were a necessity—perhaps an imitation of tombs such as Zer and Merneit at Abydos.

Across the top of the substructure were laid logs of wood or branches in a natural state *Roof* and plastered (1506, 1533, 1532). Over these were laid courses of brick one to two meters thick, which formed an accidental corbel vault in itself so that only a part of the total weight was borne by the logs (1506, 1533, 1532). On this brickwork just under the old surface was laid a second roof of logs (1506). And over all was built the superstructure, the retaining walls of which rested on the desert surface (1506). The roof of the substructure had however to support the weight of the gravel filling of the superstructure.

The burial, on left side head to the south, was placed in the central chamber (1532). *Burial* The offerings were placed partly in the central chamber but mainly in the end chambers (1532).

It is evident that roof and superstructure could only have been built after the burial *Constructed after burial* had been placed in the tomb. The tomb itself could have been built in a very short time, say two days. So it is possible that even the substructure of the tomb was not built until after the death of its possessor.

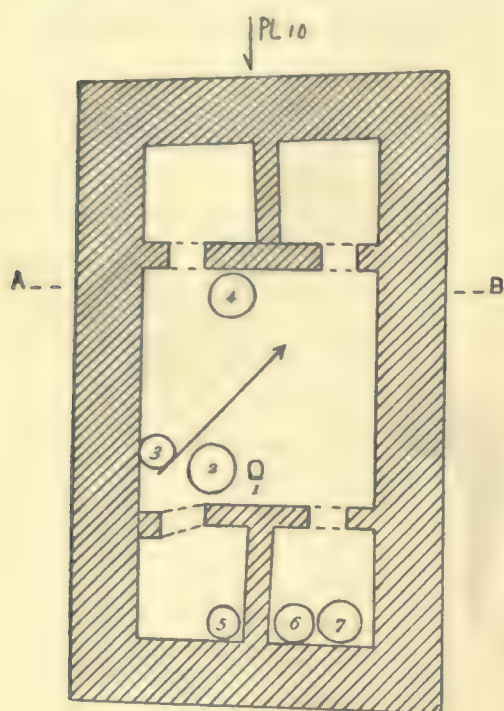
The bricks used are about  $7 \times 14 \times 28$  cm, but sometimes vary slightly from these dimensions. They have been made as usual in a rectangular wooden frame open above and below. *Bricks and brickwork* The bottom rested on the ground; the top was cut off by hand. They are usually laid in walls  $\frac{1}{2}$  brick thick in overlapping stretcher courses, poorly bonded at the corners, having to resist only the inward thrust of alluvial strata. The walls which are 1 brick thick, consist of stretcher courses (bricks laid in pairs) each overlapping irregularly that beneath, bonded at about every fourth course by a header course. The walls which are  $1\frac{1}{2}$  brick thick, present surface courses (inside) like the 1 brick walls; but the stretchers are usually backed by headers and the headers by stretchers. Some stretcher courses, however consist of three bricks laid side by side. The 2 brick walls present on the inside surface the same appearance as the 1 and  $1\frac{1}{2}$  brick walls,—i.e. three stretcher courses and one header course. Behind the stretcher we find a header, and a stretcher; behind the header we find another header.

The bricks are laid without mortar and the bonding is very imperfect but, in any case, sufficient to withstand the inward thrust of the alluvial strata. In most cases the walls are perpendicular; it is even possible that the batter in 1533 is accidental. The inside surfaces and the tops of the walls are plastered with mud 1—2 cm thick. It is important to remember



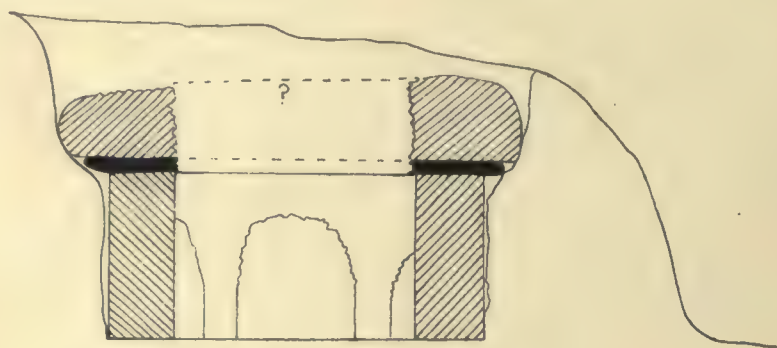
that these underground walls served a special purpose and must have been different in construction, especially in the finish of the outer surface and in the bonding, from walls standing free above ground.

**N. 1533.** A rectangular pit ca.  $420 \times 250$  cm, cut in the alluvial deposit to a depth of 240 on the east side and 200 on the west side below the present surface, Pl. 10<sup>a</sup> and Fig. 50-51. The axis



50. N. 1533, plan, 1:50.

points about  $44^\circ$  east of south. In the lower part of the pit is a mud-brick structure consisting of one main chamber and two smaller chambers at each end, see Pl. 10<sup>a</sup>. The outside walls are  $1\frac{1}{4}$  brick thick while the dividing walls are  $\frac{1}{2}$  brick thick. The  $1\frac{1}{4}$  brick wall consists of courses of headers backed with stretchers and courses of stretchers backed with headers. These courses alternate somewhat irregularly. In the west wall of the middle



51. N. 1533, section A-B, 1:50.

chamber, there were 16 courses in the following order counting from the bottom: 1, headers; 2, 3, 4, stretchers; 5, headers; 6, 7, stretchers; 8, headers; 9, stretchers; 10, headers; 11, 12, 13, stretchers; 14, headers; 15, 16, stretchers. The  $\frac{1}{2}$  brick walls consist of stretchers. The inside and the tops of all walls, so far as preserved, are plastered with mud.

*Plastered doorways* lead from the main chamber into the end chambers, the upper parts of which are unfortunately not preserved.

The roof consisted of wooden beams or saplings laid crosswise and above this a roof of horizontal courses of mud brick. The rotten wood from the ends of the saplings is preserved on the west side and above this about 30 cm of brickwork (i. e. 4 courses). Considering the width of the main chamber, (ca. 160 cm) and the length of the bricks, (ca. 30 cm), a natural corbel vault might be completed with the sixth course of bricks.

All evidence as to superstructure had been removed by the denudation of the surface.

Almost completely plundered. As the surface above the pit was hard and unbroken, this plundering did not take place in modern times, cf. N. 1581. There was no trace left of the skeleton. On the floor were found the following objects, (see Pl. 54<sup>b</sup>).

1. Alabaster jar, type S III.
2. Bowl of hard red ware, red painted, bottom flat, type XXVII.
3. Bottom of jar of coarse ware, type V.



4. Pot of red polished brown ware, containing ashes and showing fire stain inside, type XXI<sup>b</sup>.
5. Jar of coarse brown ware, containing ashes, type VI.
6. A stand of red painted coarse ware, type XXVIII, represented upside down in Pl. 54<sup>b</sup>.
7. Similar to 4. About it were white ashes(?).

N. 1532.

Similar to 1533 and adjoining it on the north, Pl. 4—8 and Fig. 52—54. Axis points about 42° east of south. The outside wall on the sides is 2 bricks thick consisting of courses of 4 stretchers each or of 2 headers each, alternating irregularly. The end walls and the dividing walls are 1 brick thick, so far as they are preserved.

It is probable that there were doorways leading from the main chamber into the end chambers, see pot in wall between chambers *a* and *c* and the dividing line in wall between *b* and *c*. Plan 52.

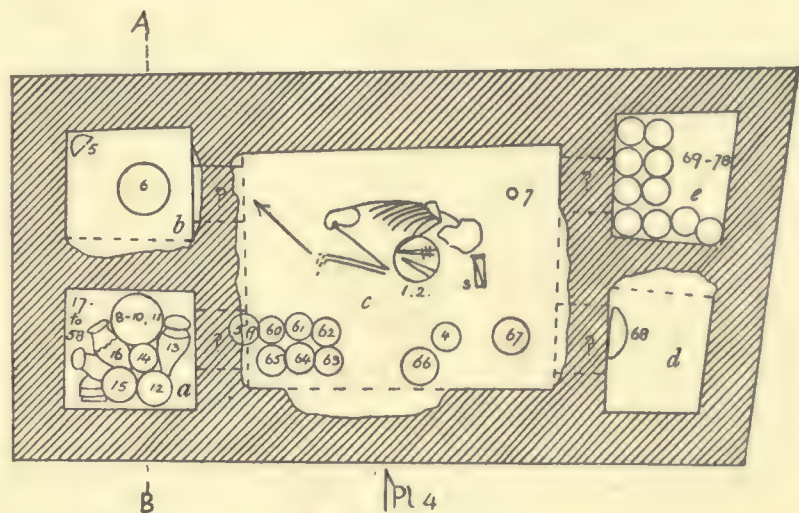
On NE corner a fragment of roofing beam was preserved, ca. 13 cm thick and above it several courses of bricks.

All evidence as to superstructure has been destroyed by denudation on the west side and by

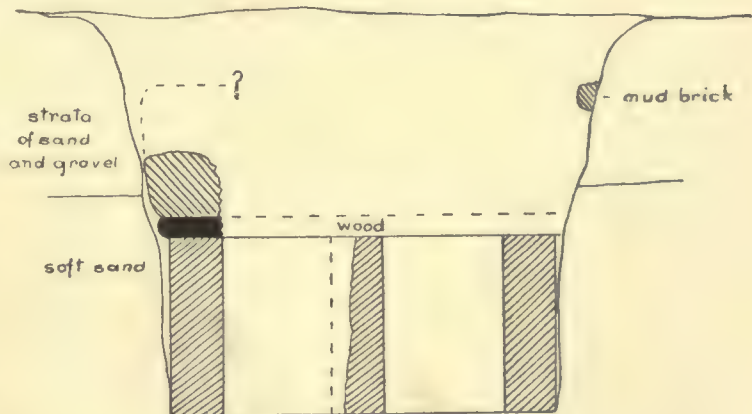
Coptic burials on the other. But the bit of wall on the west side (cf. N. 1531) may have occupied the same relation to an enclosing wall (perhaps to the enclosing wall of 1532) as did the unexplained wall along the enclosing wall of 1506 (1514).

The surface above the tomb was hard and unbroken. The numerous Coptic graves were cut in this hard debris (by preference) but without any further disturbance than was necessary for cutting the graves. Therefore the present condition of the interior of the grave dates from some period, antecedent to the Coptic period, cf. N. 1533, 1581, 1513. A certain amount of disturbance, the breaking of the alabaster jar (3) and the volcanic ash bowl (1), the crushing

of the skeleton and possibly the scattering of the necklaces, may be ascribed to the breaking of the roof and the subsequent fall of debris into the main chamber. The unequal distribution of the pottery in the end chambers, however, and the fact that the dirt had been so stirred up as to be almost homogeneous, point to plundering. It was however impossible to determine



52. N. 1532, plan, 1:50.



53. N. 1532, section A-B, 1:50.







No. 4: 22 gold shells of heavy beaten gold (there are 2 more on Plate VI making 24 in all). They have at each end a heavy eyelet fused on.

No. 3: a male gazelle of beaten gold (Fig. 54, 6). The back of this is a plain unworked sheet, with a long cylindrical eyelet above in the middle. The filling is a light pink cement. About the neck of the gazelle is a band with a *sj*-sign (goddess girdle) attached. Reverse on Pl. 9.

No. 2: a bull of similar technique, horns broken off (Fig. 54, 1). About the neck, is a band with a Hathor head (sistrum?) attached. Reverse on Pl. 9.

No. 1: a capsule with a lid, of beaten gold (Fig. 54, 5). This was apparently round originally but is now crushed flat. The under side is ornamented as if with the legs of a reptile or an insect, see Pl. 9. On the upper side is the Neith-sign inlaid with dark blue paste. The capsule has no eyelet and was therefore not part of the necklace.

Plate 7. From below, the first string of beads consists of carnelian and syenite (?) beads. *Plate 7.* There may have been more than three carnelian beads between the syenite beads: otherwise arranged according to order found in fragments.

The second and third strings are of carnelian beads. The fourth, fifth and sixth are of thin gold filled with cement. The seventh is of solid gold beads. The eighth is a tentative stringing of gold and carnelian beads, and, while showing the possibilities of the material, is certainly not correct. Below are two heaps of broken gold beads.

Plate 8. On the left, a string of small cylindrical beads of fine dark green stone almost translucent (No. 9), then two strings of garnet beads (Nos. 10, 11) and a small string of blue glaze beads (No. 12). On the right, are four strings of carnelian beads (Nos. 13—16). In the middle, above is a string of small light green stone beads (No. 8), then two strings (Nos. 6, 7) of cylindrical beads of soft grey stone and of white shell (?), and a string of faded blue glaze beads (No. 5). Below are four rows of beads. These are all carnelian excepting the two light ones in the upper row (No. 4) of which one is beryl (?) and the other amethyst, and also excepting the middle bead of the second and the middle bead of the third row both of which are haematite. *Plate 8.*

Plate 9. Above, 9<sup>a, b, c</sup> and <sup>d</sup> give reverse views of the gazelle, the bull, the capsule and *Plate 9.* the parts of the cylinder. Below, 9<sup>e</sup>: on the left is a twisted gold wire, two strand, with a loop at each end (Fig. 54, 3). As the loops are unbroken that to which they were attached must be broken or decayed. Next this on the plate are the parts of the gold seal cylinder (Fig. 54, 2; see Pl. 44). When found the two discs were in position on the ends of the cylinder (see Plate 5) and the small cap with the eyelet inside covered the hole in the disc next to it on the plate. The other hole is worn. The whole rested in the gold band, or case, on the right. The cylinder was probably the plating of a wooden cylinder (cf. 3091).

Below on 9<sup>e</sup> is the gold circlet (Fig. 54, 7), and inside the circlet counting from the left we have a flint bracelet, a slate bracelet (Fig. 54, 10), a gold bracelet (Fig. 54, 8) and finally a broad copper bracelet in which are wedged two more gold bracelets (Fig. 54, 9). Beneath are two gold finger-rings (Fig. 54, 3 and 4).

The other contents of the tomb were:

1. Bowl, Pl. 46, of light blue volcanic ash, depression in inside, found upside down with 2 also upside down under it, type S xvii.



2. Bowl, Pl. 46, of dark veined, porous volcanic ash (?), ring inside, type xvii. Under it were found bones of arm with bracelets, see print on ground in Pl. 5<sup>b</sup>.
3. Cylindrical jar, Pl. 46, alabaster, with cord, type S1a. Contents ashes and sand.
4. Bowl, Pl. 46, of green volcanic ash, rim, depression, type Sxvii.
5. 8. 9. 25. Bowls, Pl. 52<sup>a</sup>, No. 1, 2, 3, of brown ware, red painted, line, or pebble, polished, type xxiv. Vertical lines inside, horizontal on outside of rim. The bottom is not flat.
6. 57. 58. Pot, Pl. 52<sup>b</sup>, of hard coarse red ware, type xxi.
7. Flint bracelet, Pl. 9 on the left, and part of another.
8. See 5. Diameter 16 cm, h. 10.
9. " 5. " 15 " , h. 10.
10. 39—49. 52—55 (all broken). 66. Flat plates, Pl. 52<sup>a</sup>, 16—23, of soft brown ware, red painted, line (pebble) polished, type xxvi. Lines cross the plate but on the rim the lines are parallel to rim. Some are thick and heavy, others thinner, cf. 18 and 19 with 20 and 23. The size varies from diam. 21, h. 5 to diam. 25, h. 6 cm.
11. Pot similar to 6 but with spout, of smooth coarse red ware, type xxi, diam. 34, h. 30.
12. 15. Tall jar, Pl. 52<sup>b</sup>, of soft brown ware, dull red polish, in bad condition, type ii. H. 70 cm.
13. 14. Tall jar, Pl. 52<sup>b</sup>, of hard, fine reddish brown ware, with raised line around shoulder, type i, h. 68 cm. Pot marks.
14. See 13.
15. See 12.
16. Tall jar, Pl. 52<sup>b</sup>, of hard, reddish brown ware, type i, h. 73. Around shoulder a row of marks, see Pottery type i.
- 17—19. 21—24. 26—30. 35—38. 68. Bowls, Pl. 52<sup>a</sup>, No. 5—15, of soft brown ware, red painted, line (pebble) polished, type xxiv. All have horizontal lines on rim. Inside some have vertical lines (9, light colored), some have horizontal lines (11 and 15) some have partly vertical and partly horizontal lines (14) and some have both (10 dark red). All have a slight circular depression inside. They average about diam. 23, h. 10. No. 17 measures diam. 22, h. 9.
18. 19. See 17 (broken).
20. Bowl similar to 5, type xxv, diam. 20, h. 12, Pl. 52<sup>a</sup>, No. 3.
21. See 17. Diam. 20, h. 10.
22. " 17. " 23, h. 12.
- 23—24. " 17. Broken.
25. " 5. Diam. 16, h. 9.
- 26—30. 68. Similar to 17. But better formed, Pl. 52 No. 5—9, type xxiv<sup>a1</sup>.
- 31—32. Pot, Pl. 52<sup>b</sup>, No. 3, of smooth red ware, type xxi. No. 32 is slightly smaller than 31 and was found inside 31.
33. Tall jar, Pl. 53<sup>b</sup>, similar to 12—15, with raised line about foot, type i, h. 70. Pot mark.



34. Pot with spout, Pl. 52<sup>b</sup>, of light brown ware, line polished, type xxiii.

35. See 17. Diam. 23, h. 9. 42—44. See 10. Diam. 23, h. 6.

36. " 17. " 22,5, h. 9. 45. " 10. " 25, h. 5.

37. " 17. " 23, h. 9. 46. " 10. " 25, h. 6.

38. " 17. " 22, h. 9. 47. " 10. " 24,5, h. 6.

39. " 10. " 23, h. 6. 48. " 10. " 24, h. 6.

40. " 10. " 22, h. 6. 49. " 10. " 24, h. 6.

41. " 10. " 21, h. 5.

50—51. Pot, similar to 32, of smooth red ware, type xxi. Diam. 17, h. 16.

52—55. See 10. All broken. Under these were the leg bones of a small animal (kid?)

56. Similar to 5, Pl. 52<sup>a</sup>, No. 4, type xxiv<sup>a</sup>3. Diam. 15, h. 10.

57—58. See 6. Diam. 28, h. 28. In 58 were the rotten bones of a small animal (kid?).

59—65. 69—78. Jars, Pl. 52<sup>b</sup>, of coarse red ware, with vertical scratches on the lower part (type v). Contents sand and mud. No. 61 shows distinctly a silt deposit as if water had stood in the grave. No. 59 was built into the wall (in the entrance to chamber *a*?).

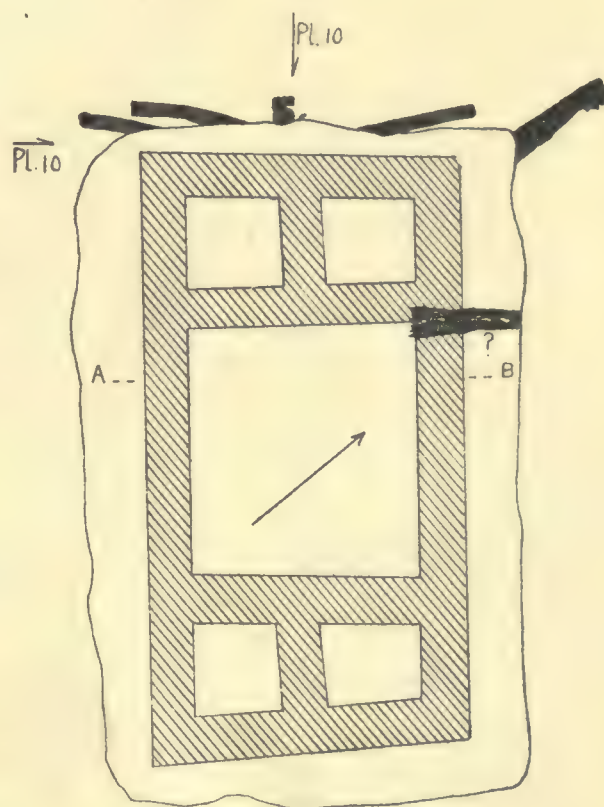
66—67. See 10. Diam. 24.

68. " 26.

69—78. " 59.

In addition, there were found a number of fragments in the dirt, Pl. 46<sup>a</sup>, unnumbered. Those in the top row are of slate, those in the second row are of volcanic ash, except the dark piece on the right of second row which is of dark diorite. It is doubtful if these pieces belong to the tomb; or, rather, it is probable that some of them, at least, came from the surface into the tomb at the time of the collapse of the roof.

**N. 1506.** Similar to 1533, but with double wooden roof, see Pl. ix, 3. Axis points 52° east of south. Walls are all 1 brick thick, stretcher courses of two stretchers side by side with an occasional header course. Plastered inside and on top of walls. The plaster on the end walls of the main chamber at the places where 1533 has doorways, is marked with rectangles scratched in the wet plaster to indicate doorways. A layer of saplings or tree limbs was laid across the tops of the walls projecting about 40 cm beyond the walls (see Pl. x, 3 right side where the brick work has sunk down on the plastered top of the wall crushing the wood.) Above this wooden roof was a brick roof of which traces of three courses were preserved (originally ca. 7?); and then came a second layer of logs about 15 cm in diameter, see Pl. ix, 2



55. N. 1506, plan, 1:50.



(from above), and Plate x, 3 (from the inside showing bending of the logs under pressure).

Above there were well preserved traces of a superstructure, see Map II and Pl. x, 1, 2, consisting of a central mass with offering niches, surrounded by a low wall. Between the wall and the central mass, there is a floor laid on *gebel*, consisting of mud plaster with a thin coating of white. There was at least one entrance to this intermediate space,

on the south end of the west or valley side, see Pl. x, 1. About this entrance was a horseshoe-shaped platform consisting of a white coated mud floor outlined with bricks (badly cut up by Coptic burials), see x, 2. The surface of the surrounding wall and that of the central mass were also coated white. The inner niche of the compound offering niches was painted red over the white.

The superstructure is not oriented like the pit but points  $43^\circ$  east of south while the axis of the pit points  $52^\circ$  east of south. Thus it is clear that exact orientation was probably not of importance and that the superstructure was built after the burial had been made and the grave closed (cf. also 1514).

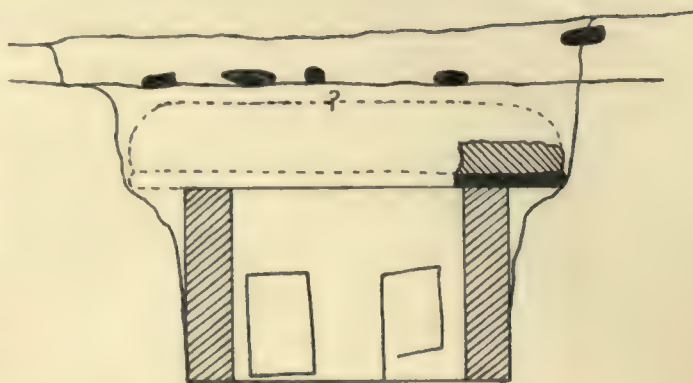
The grave had been completely plundered, from the appearance of the surface probably in modern times. In the *lower* level inside and probably belonging to the tomb was found:

1. Tall jar, Pl. LV, of hard light reddish-brown ware with a raised band around the shoulder, type I. Inscription, see Pottery type I.
2. Like 1, Pl. LV. Inscription, see Pottery type I.
3. Small jar, Pl. LV, of fine grained light brown ware, line polish, type XIV. Potmark.
4. Frag. of red polished bowl, Pl. LV.

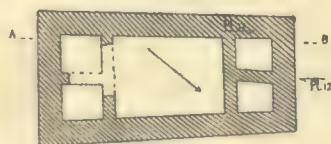
**N. 1608.** Similar to 1506. Axis points  $40^\circ$  east of south. Outside walls are 1 brick thick, headers and stretchers as usual (i. e. ca. three stretcher courses to one header course); the dividing walls are  $\frac{1}{2}$  brick thick, of overlapping stretchers, bonded at all joints with the main wall. Plastered inside and on top of walls. The *gebel* above the wall for a distance of 60 cm is apparently also heavily plastered

(5–8 cm thick); but this may be simply decayed brick of the roof. At one point on the west side is a trace of wood on top of the wall, and on the north end one log above the upper mud plaster was also preserved so that we have to infer a double wooden roof with a roof of mud or mud brick resting on the lower wooden roof (cf. 1506), see plate XI, 3, 4.

The tomb was completely plundered. The breaking down of the southern dividing wall gives the appearance of the work of *sebbakhin*. In the dirt was found the rough pot seen in



56. N. 1506, section A—B, 1:50.



57. N. 1608, plan, 1:100.



58. N. 1608, section A—B, 1:100.

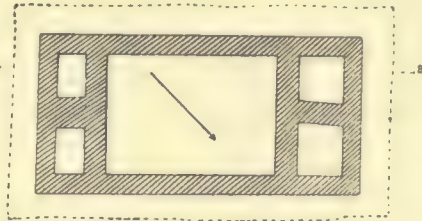


Pl. XI, 3, a white shell bracelet and small fragments of volcanic ash, alabaster and slate. Above were 6 Coptic burials all more or less disturbed.

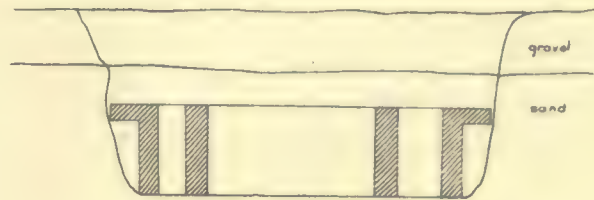
N. 1621. Similar to 1533.

Axis points  $46^{\circ}$  east of south. All walls are 1 brick thick, stretcher courses of two stretchers with an occasional header course.

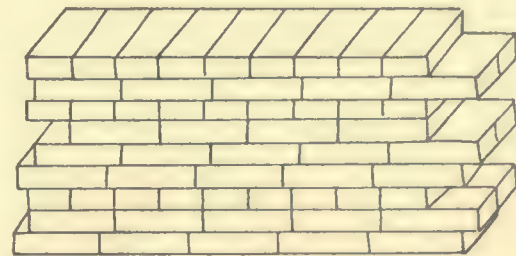
For example, in the wall between the two northern chambers, counting from the top, courses 1, 3, and 7 are header courses and courses 2, 4, 5, 6, 8 and 9 are stretcher courses (the courses below nine are unrecognizable). The top of the outside wall is built out about 40 cm all around to meet the *gebel*. The space beneath between the wall and the *gebel* is filled with sand. On the west side, in this sand filling, at about



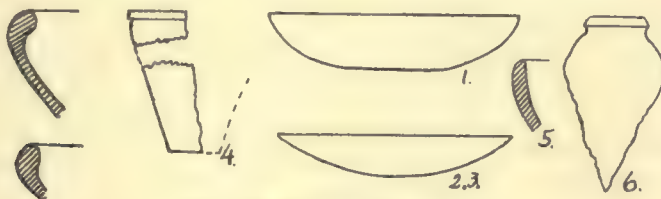
59. N. 1621, plan, 1:100.



60. N. 1621, section A-B, 1:100.



61. N. 1621, brickwork.



62. N. 1621, pottery, 1:10.

70 cm above the floor of the tomb, is an inexplicable mud floor.

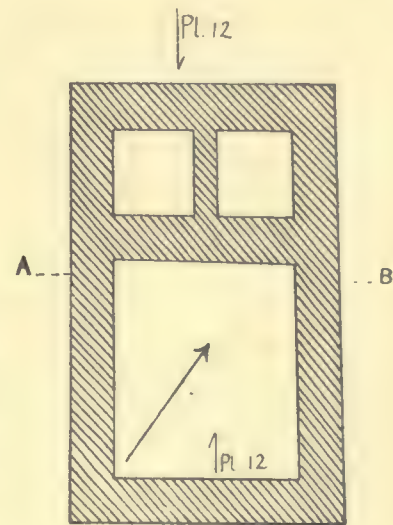
No trace of the roof was to be found nor of superstructure.

In the chamber were three pans in position.

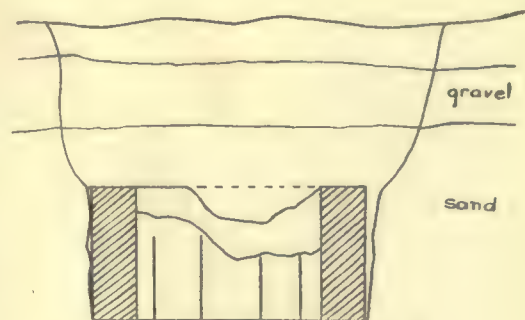
1. Pan of brown ware, red painted, line polished inside (cross lines), type xxvi. Diameter 34, h. 7.5.
2. Pan of similar ware, type xxvi. Diam. 32, h. 6.
3. Pan of brown ware, red painted, *not* polished, type xxvi. Diam. 32, h. 6.

In the dirt were fragments of (4) a pot type xxi, of (5) a bowl type xxiv, (6) a jar type vi, and fragments of an alabaster and of a slate bowl.

N. 1624. Similar to 1533 but with only three chambers see Pl. XI, 1. Axis points  $35^{\circ}$  east of south. All walls, except one cross wall, are 1 brick thick, stretchers and headers as usual. The cross wall dividing the end



63. N. 1624, plan, 1:50.



64. N. 1624, section A-B, 1:50.



chambers is  $\frac{1}{2}$  brick thick, all stretchers. Doorways are indicated by scratches made in the plaster while wet, on north wall of main chamber opposite end chambers. Plastered inside and *on top of walls*. No other trace of roof except possibly a clump of bricks above gravel stratum on east side.

Completely plundered.

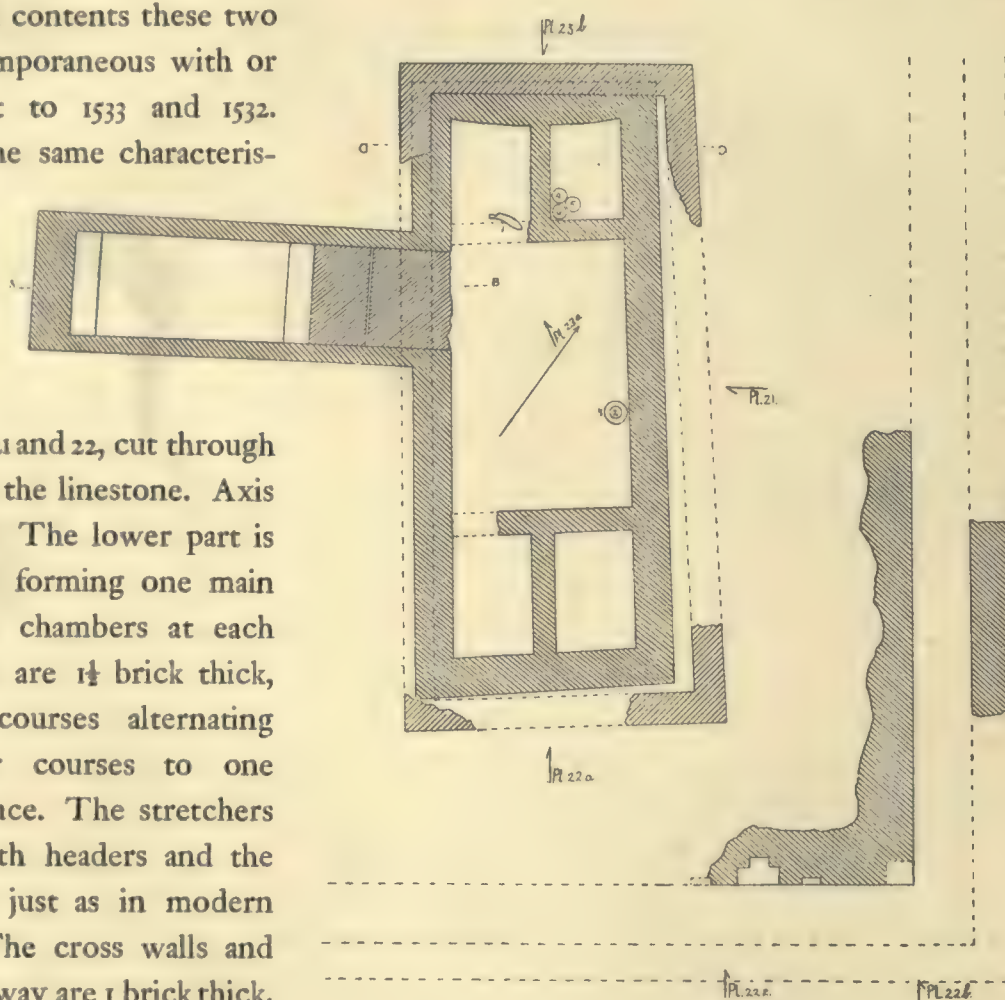
#### 4. Large tombs with end chambers, wooden roofs and stairways, type A. 2. b.

There are but two tombs with wooden roofs and stairways,—1513 and 1581, the largest two wood-roofed tombs in the cemetery. From their position and contents these two tombs are either contemporaneous with or immediately subsequent to 1533 and 1532. They present exactly the same characteristics, as the wood-roofed tombs of class 3 except that they are entered on the river side (west) by a stairway with door.

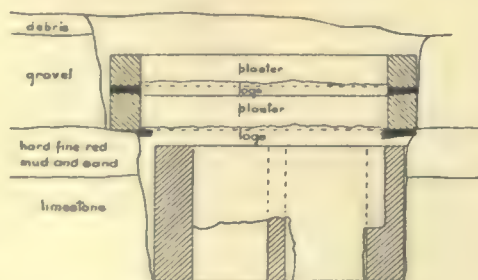
**N. 1581.** Rectangular pit, Pl. 21 and 22, cut through the alluvial deposit into the limestone. Axis points  $36^\circ$  east of south. The lower part is occupied by brick walls forming one main chamber and two small chambers at each end. The outside walls are  $1\frac{1}{2}$  brick thick, stretcher and header courses alternating (usually three stretcher courses to one header course) on the face. The stretchers are as a rule backed with headers and the headers with stretchers just as in modern Egyptian brick-work. The cross walls and the side-walls of the stairway are 1 brick thick.

All exposed surfaces and the tops of the walls are plastered.

Across the tops of these lower walls, which were 180 cm high, was a row of tree limbs or saplings.



65. N. 1581, plan of substructure and superstructure, 1 : 100.



66. N. 1581, section C-D, 1 : 100.



67. Section A-B, 1 : 100.



The holes seen in Pl. 22 to the north of the stair and on a level with the top of the doorway all contained rotten wood.<sup>1</sup> Other traces were found also on the east side.

Above these logs a wall was built all around the pit. This wall is best preserved on the north end, see Pl. 21 and 22; but there are also remains at each of the southern corners, see Fig. 65. On the sides this upper wall rested partly on the ends of the logs and partly on the *gebel*. On the ends, it rested, not on the logs but, directly on the lower wall and the *gebel* behind it. The lower edge of the face of the north end of this upper wall shows plainly an unplastered strip where the logs crossed and above this a plastered strip, see Pl. 22. About half way up the face of this upper wall is a second unplastered strip corresponding to the remains of logs found in a second row of holes on each side of the northern end. According to these indications, there was a double wooden roof. The lower one rested on the walls of the chambers and the *gebel* behind and was heavily plastered. The second roof rested in the brickwork half way up the upper wall which itself rested partly on the chamber-walls, partly on the logs of the lower roof and the *gebel*. The second roof was also plastered. No evidence was found as to the existence of a third roof across the top of the upper wall (see evidence of superstructure, below). Nor was any evidence found as to whether the space between the roofs was filled with sand or left empty.

The stairway, leading down from a point ca. 10 cm below the old surface, was formed above of steps cut in the *gebel* and plastered, below of brick steps. It was flanked by side walls the tops of which were level with the top step of the stair. The doorway into the tomb had a wooden lintel and was sealed up after the burial by two bricks walls, see Pl. 21. The stairway itself was filled with heavy boulders and gravel.

On the surface at the southeast corner, under the debris from the New Empire tomb above was found the parts of a superstructure shown in Pl. 22<sup>b, c</sup> (see also Fig. 65). Here the superstructure shows a central mass with compound and simple niches on the south end, but without niches on the east side. On the east was an enclosing wall (cf. 1506). The surface on the south end was too much disturbed to permit any conclusion as to the existence of a protecting wall on that side. On the front or valley side, the bit of wall shown on Map 1 may belong either to 1581 or to 1626. From these indications, it is probable that the superstructure consisted of a central mass with alternating compound and simple niches (possibly three simple niches between every two compound niches) on the north end, west side and south end surrounded by one enclosing wall (with entrance to the enclosure on valley side, like 1506?). The surface of this central mass has only a very slight batter. The mass was at least 50 cm high, with outside brick walls ca. 100 cm thick and with a filling of gravel, limestone chips and other rubbish (cf. N. 3017).

The walls of the superstructure are not parallel to the sides of the pit. The superstructure was probably built subsequent to the burial (cf. 1506 and 1514).

The grave was covered by a hard packed layer of debris from the rock cut tombs in the limestone hill. This layer was undisturbed except for the Coptic burials cut in it; and yet the tomb was completely plundered. Therefore this plundering took place previous to

<sup>1</sup> The holes lower down were simply decayed spots in the brick due to infiltration or other cause and contained no wood dust.



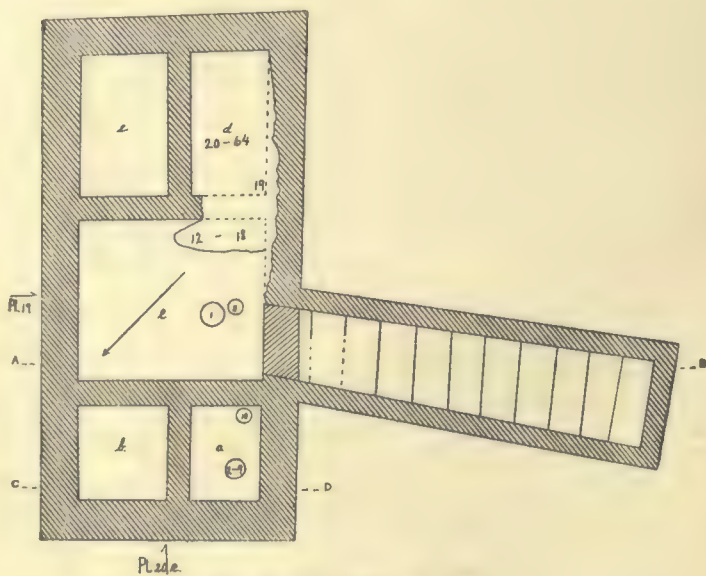
the digging of the tombs above. The tombs immediately above 1581 are none of them later than the New Empire, and most of them are of the Middle Empire. Therefore the plundering must have taken place previous to the New Empire.

Most of the objects found in the tomb were mixed with the dirt above the floor. However a few objects were found on the floor:

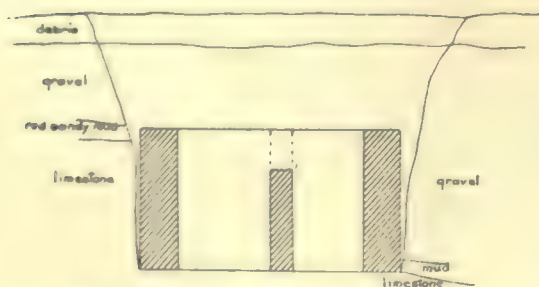
1. A rough flint knife, see Pl. 23<sup>a</sup> and 40<sup>a</sup>.
2. An alabaster cylindrical jar, Pl. 45<sup>b</sup>, No. 1.
3. An alabaster cylindrical jar, Pl. 45<sup>b</sup>, No. 2.
- 4—6. Three jars, like 52<sup>a</sup> lower row right side, of coarse red ware. There was also found in the dirt below the top of the chamber walls:
7. The pottery shown Pl. 52<sup>a</sup>. The two jars on left end of lower row are of smooth, red painted brown ware. The rest of coarse red ware.
8. Stone vessels Pl. 45<sup>b</sup> (except the two jars 2 and 3). The bowl in the middle of upper row is of volcanic ash. The rest are of alabaster.
9. The 19 small rough flints shown Pl. 40<sup>b</sup>.

**N. 1512.** Similar to 1581, see Pl. 19 and 20. The traces of the roof are confined to a few patches of broken brickwork on the east side.

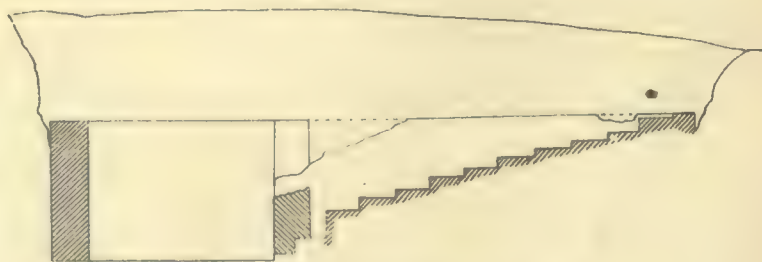
The contents of the tomb were found scattered by plunderers, see Pl. 20<sup>b, c</sup>. The heap in the southwest corner of the main chamber appears to have been pulled out of chamber *d* and part of that in *d* to have been pulled through the hole in the wall from *e*, at a time when the chambers contained a certain amount of debris. Except for the pots in *a*, chambers *a* and *b* were empty. There was no trace of skeleton. Since *d* and *e* contained a quantity of pots and stone vessels, it seems probable that *a* and *b* were not empty. It is possible that they contained chiefly food, clothing or furniture which was so broken by the plunderers as to decay utterly leaving no distinguishable trace in the muddy debris.



68. N. 1512, plan, 1:100.



69. N. 1512, section C-D, 1:100.



70. N. 1512, section A-B, 1:100.



The following objects were found in the grave:

1. Slate pan, Pl. 45, with depression inside bottom.
- 2—9. 11. 18. 22. 25. 45. 51—53. 62. Flat pans of brown ware, Pl. 52<sup>b</sup>, type xxvi, red painted, line polished. Lines cross face of pans. Diam. 21—23 cm.
10. 17. 58. 60. Jars of coarse red ware, Pl. 52<sup>b</sup>, vertical smoothing scratches, smoothed with finger (wet) around neck, type v. H. ca. 33 cm.
11. See 2. Diam. 23.
12. Slate bowl, Pl. 45<sup>b</sup>.
13. Slate pan, Pl. 45<sup>b</sup>, depression in bottom inside.
14. Part of a slate pan, Pl. 45<sup>b</sup>, depression in bottom inside, rest of pan 49.
15. Alabaster pan, Pl. 45<sup>b</sup>, depression in bottom inside.
16. 19. 21. 30—33. 37. 38. 59. 61. Jar, Pl. 52<sup>b</sup>, type vi, of coarse red ware. H. 25.
17. See 10. H. 33.
18. See 2.
19. See 16.
20. Alabaster pan, Pl. 45<sup>a</sup> (half).
21. See 16.
22. See 2.
23. 36. Tall jar, Pl. 52<sup>b</sup>, type ii, of brown ware painted red, with uniform dull polish. H. 65. Contents ashes, coals.
24. One half of a bowl of volcanic ash, Pl. 45<sup>b</sup>, depression in bottom inside. The other half was found in the dirt in the southeastern chamber.
25. See 2.
26. Part of a bowl of fine limestone, Pl. 45<sup>b</sup>, with depression in bottom inside. The rest of this bowl was found lower down in this same heap, see 50.
27. Bowl, Pl. 52<sup>b</sup>, type xxiv<sup>a</sup>, of brown ware, red painted, line polished. Diam. 19, h. 9.
28. Bowl, Pl. 52<sup>b</sup>, type xxiv<sup>b</sup>, of brown ware, red painted, line polished. Diam. 18, h. 12.
29. Fragments like 28.
- 30—33. See 16.
34. Slate pan, Pl. 45<sup>b</sup>, with depression.
35. Slate bowl, Pl. 45<sup>b</sup>, with depression.
36. See 23.
37. 38. See 16.
39. Bowl of volcanic ash, Pl. 45<sup>b</sup>, with depression.
40. Part of alabaster bowl, Pl. 45<sup>a</sup>, with depression.
41. Bowl of pink limestone, Pl. 45<sup>a</sup>, with depression.
42. Part of bowl of volcanic ash, Pl. 45<sup>a</sup>, with depression. Rest found in E.
43. 44. These numbers were accidentally omitted in marking the objects.
45. See 2. Diam. 21—25.
46. Large pot of smooth red ware (hard baked), type xxi<sup>a</sup> 4. Diam. ca. 38, h. ca. 20. Broken.



47. Potstand, smooth red ware (hard baked), type xxviii. Diam. 28, h. 12.
48. Alabaster pan, Pl. 45<sup>a</sup>, with depression.
49. Part of 14.
50. Rest of 26.
- 51—53. See 2. Broken.
54. Similar to 28, type xxiv<sup>b</sup>. Diam. 14.5, h. 10.
55. See 2.
56. Slate bowl, Pl. 45<sup>b</sup>, with depression.
57. Slate pan, Pl. 45<sup>b</sup>, with depression. This pan had been broken and mended in antiquity. A line was scratched zigzagging across the line of breakage in order to give a hold to the cement. The cement was a hard fine white plaster.
58. Like 10, type v.
59. Like 16, type vi.
60. Like 10, type v. Decayed.
61. Like 16, type vi. Decayed.
62. Like 2—9, type xxvi. Decayed.
63. Slate pan, Pl. 45<sup>b</sup>, with depression. The maker accidentally cut through the bottom and repaired the mistake by setting in a separate piece, a disc of slate cut to fit the depression. This disc was fastened with hard white cement.
64. Fragments of a slate pan, Pl. 45<sup>b</sup>, with depression.
65. Small jar of calcareous alabaster, type S xv<sup>2</sup>. Diam. 9.
66. Top of cylindrical jar of alabaster. Raised cord around neck. Diam. 10.5.
67. Fragment from the rim of crystal goblet, Pl. 41<sup>a</sup>. Found 10 cm above floor with a lot of slate splinters belonging to 64.

There was also found a bit of a slate bracelet and various fragments of stone vessels and pottery belonging to or similar to the objects described above.

## 5. Large tombs with corbelled roof, end chambers and stairway, type B. 1. b.

In the middle and northern sections of the cemetery, a number of tombs are covered not with a wooden roof but with a corbel vault. These vaults spring from the top of the first to fifth course and are formed by allowing each course to project ca. 2—10 cm beyond the course below. The facing of the vault is composed of stretcher courses with an occasional header course (about 3 to 1); the make-weight behind the facing, which served to weigh down the courses (on the cantilever principle) is composed of bricks and mud laid in very roughly. When the width of wall permits the makeweight is composed of headers, see Pl. 32. Sometimes the roof rose to a dome-like hump over the middle chamber (1586); but in other cases the makeweight was built up so as to present a flat roof outside; and in one case, at least (N. 1515), a thick flooring of brick was built over the whole as an additional protection. In some cases the corner is groined, the surfaces cutting each other at right angles (N. 1586, 1513, 1511). In other cases the corners are rounded by laying the bricks radiating around the corners (N. 1584).



As all these vaults are longer than they are broad, the sides meet over the middle line of the vault and the ends do not meet.

The angle at which the sides meet varies with the height to which the walls are carried after they have approached to within a brick's length of each other.

No case was found where the projecting corners of the bricks were chipped off to produce a curved surface inside the vault. On the contrary, a smooth surface was obtained by plastering.

Where doorways were necessary, the vault was supported over these by wooden logs or saplings.

As the surface was denuded and broken in the neighbourhood of all the vaulted tombs, traces of superstructure were preserved in only one case (1514). In this case we find a central mass covering the pit, consisting of a outside wall filled with gravel and rubbish. The walls have only a slight batter and are broken by alternating simple and compound niches on the south, west and north(?) sides. Around the whole, runs a low enclosure wall marking off the sacred place of offerings. The surfaces of all these walls are plastered white; the niches are in addition painted red.

It is probable that all the larger tombs had such superstructures. But no evidence whatever in regard to the smaller vaults has been preserved.

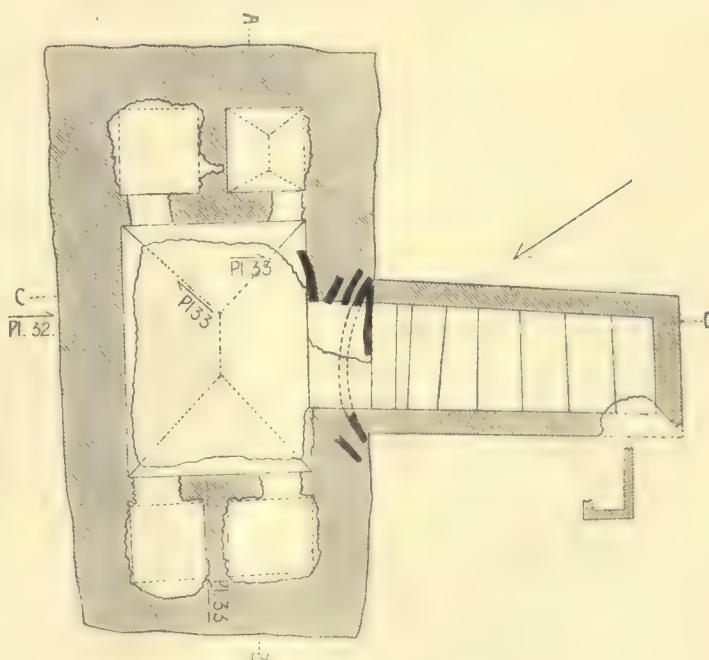
It is to be noted that in the one case of superstructure preserved, the superstructure crosses the stairway leading into the tomb and was therefore built after the burial had been made and the stairway filled up.

The chronological order of the tombs of this class is apparently: 1571, 1514, 1515, 1513, 1586, 1584, 1572, 1605, 1626. N. 1572 and 1626 have the stairway on the north as a result of their being crowded in between older tombs. The best preserved tombs are 1586 and 1584. N. 1586 is described first therefore for convenience. The other tombs are described in order as above.

**N. 1586.** A rectangular pit cut in the alluvial strata, Pl. 32, 33 and Fig. 71—75. Axis points about  $55^\circ$  east of south. Occupied by a mass of brickwork containing five groined corbel vaults, — a main chamber with two smaller chambers on each end, see Pl. 32, 33<sup>a</sup> (shows holes broken into the two chambers on the south end) and 33<sup>d</sup> (shows groin in south east corner of main chamber).

The facing of the corbel consists of about three stretcher courses to one header course. The filling consists of headers. The inner surfaces are all heavily plastered producing a smooth curved surface (Pl. 33<sup>c, d</sup>).

The packing (makeweight) of the vault over the main chamber is carried up *at least*



71. N. 1586, plan, 1 : 100.



50 cm above the packing of the side vaults, producing a sort of rough dome.

The doorway on the west side is, on the inside, a truncated corbel and is covered by saplings supporting the mass of bricks above, see Pl. 32 and Fig. 72. The doorway was closed with a block of brickwork consisting of alternate header and stretcher courses, plastered on the outside. The doorway was approached by a stair built of mud bricks and flanked by side walls 1 brick thick. This stairway was filled with boulders.

The surface about this tomb was denuded by *sebbahin* to a level below the old surface and therefore no evidence as to the superstructure could be found.

Only one object was found in position in the tomb:

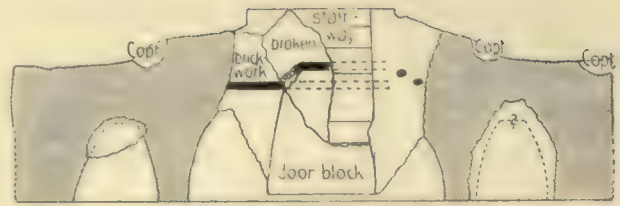
1. A fat jar, type III, of red painted brown ware, found in NE chamber.

But a number of other objects were found in the dirt of the main chamber and undoubtedly belonged to the grave.

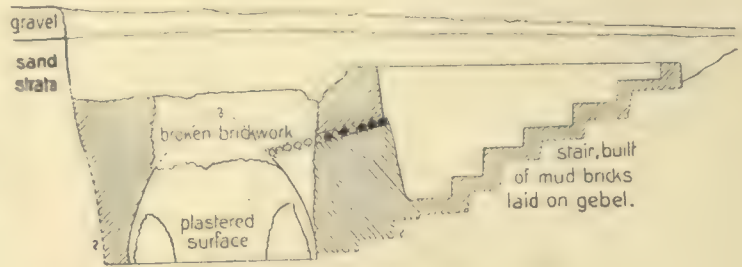
2. A roughly chipped flint knife, Pl. 39<sup>2</sup>. Broken, one small piece missing.
3. Jar, type IX<sup>1</sup> of smooth red-painted brown ware.
4. Jar, type IX<sup>4</sup> of smooth hard reddish-brown ware.
5. Jar, type V of coarse red ware with vertical scratches.
6. Jar, type VI of coarse ware.
7. Pan, type XXVI of brown ware, red painted, line polished.
8. Bowl, type XXIV<sup>a</sup> of brown ware, red painted, line polished.

And also the stone vessels shown on Pl. 48<sup>a</sup>. Counting from the left above, these are (1) of slate, (2—4) of volcanic ash, (5) of alabaster. In the second row, the pieces are (1—3) of volcanic ash, (4—5) of red and white brecchia, and (6—7) of alabaster.

On the plaster of the main chamber, west side, were a number of mud wasp cells filled and caked with the same gravelly dirt which filled the rest of the chamber (Pl. 33<sup>c</sup>). These cells must have been made previous to the date when the tomb fell into its present condition, either just subsequent to construction, or subsequent to the fall of the vault. The upper part of the tomb had been worked over by *sebbahin* but there was nothing to show that these had penetrated into the vault. The plunderers entered the tomb through the top of the central vault. The Coptic burials above the tomb cut into the vault in a number of cases.



72. N. 1586, section A-B, 1:100.



73. N. 1586, section C-D, 1:100.



74. N. 1586, plan of SW chamber, 1:50.



75. N. 1586, section of SW chamber, 1:50.

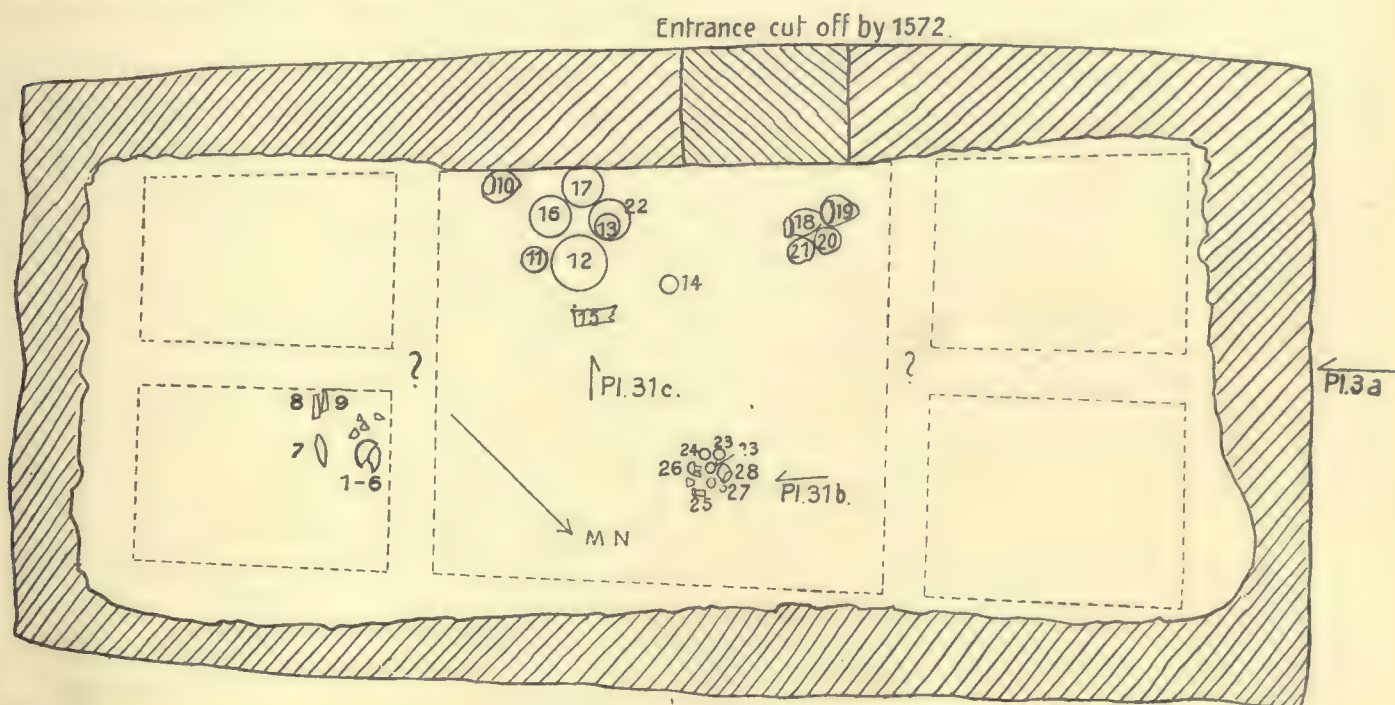


N. 1571. Similar to 1586. Axis points  $42^{\circ}$  east of south. This tomb was worked by two gangs of workmen and received two numbers.  
N. 1526.

The site was occupied by a depression as usual. And the pit was filled with a mass of mud and gravel. The inside surfaces of the walls were all decayed and the outlines of the dividing walls had disappeared.

The stairway was destroyed by the builders of 1572; and the doorway, the sides of which are visible from the inside of the main chamber, is blocked by the walls of 1572, see Map II.

Owing to the disturbance of the surface, by 1572, Coptic graves and *sebbakhin*, no evidence on superstructure was available.



76. N. 1571, position of objects found, 1:50.

On the floor, of the main chamber, were found the following objects, see Pl. 31<sup>a-c</sup> and Fig. 76.

1. Bowl of fine volcanic ash, Pl. 49<sup>a</sup>, with depression. Broken (all found). At this point, there was a mass of pieces of stone vessels (Nos. 1-6) *embedded* in mud to a height of 40 cm above the floor.
2. Fragments of pan of slate, Pl. 49<sup>a</sup>, with depression.
3. Top of a cylindrical jar of alabaster, Pl. 49<sup>a</sup>.
4. Plate of impure slate, Pl. 49<sup>a</sup>, with depression. No lip. Broken (all found).
5. Bowl of slate, Pl. 49<sup>a</sup>, with depression. No lip. Broken (few bits missing).
6. Bowl of red-veined alabaster, Pl. 49<sup>b</sup>, with depression.
7. Plate of slate, Pl. 49<sup>a</sup>, without depression. Broken (all found). Part was found higher up in the mud, at ca. 60 cm.
8. Bowl of slate, Pl. 49<sup>a</sup>, with ring depression. Broken. Part found higher up in mud, at ca. 50 cm.
9. Parts of 8 and 7.
10. Jar of coarse red ware, of type v.



11. Bowl of volcanic ash, Pl. 49<sup>a</sup>, with depression. Rim chipped.
12. Pan of calcareous alabaster, Pl. 49<sup>b</sup>, with depression. Broken (all found).
13. Bowl of clear alabaster, Pl. 49<sup>b</sup>, with depression. Broken (all found).
14. Copper bracelet, consisting of thin broad concavo-convex band of beaten copper, like N. 1532, Pl. 9<sup>d</sup>, see Pl. 31<sup>c</sup>.
15. Cylindrical jar of alabaster, Pl. 49<sup>b</sup>. Rim broken.
16. 17. 22. Plates of brown ware, red painted, line polish across face, type xxvi. Diam. ca. 28. On 22 was found a piece from the shoulder blade of a small animal (kid?).
- 18—21. Like 10, type v.
22. See 16.
23. Small pot of slate (?), Pl. 41<sup>c</sup>. Consisting of two pieces divided at the shoulder. The lower part had four vertical slate strips, dividing the surface into four equal parts. These strips were fastened with white cement. The upper part was scratched at four places opposite these strips. The pot was well preserved except that the strips were broken and decayed.
24. Small bowl with spout, of volcanic ash, Pl. 41<sup>c</sup>. Whole.
25. Small jar of alabaster, Pl. 49<sup>b</sup>. Broken (all but small bit found).
26. Small jar of limestone. Pl. 49<sup>b</sup>. In two pieces divided at the shoulder. Whole.
27. Fragments of an ivory cup, Pl. 41<sup>b</sup>.
28. Half of a bivalve shell, to hold a cosmetic, Pl. 41<sup>a</sup>.
29. Half of slate cosmetic box in the form of a fish, eye inlaid, Pl. 41<sup>c</sup>. Found under 28.

In addition a number of pieces of stone vessels and pottery were found in the mud at from 30 to 100 cm above the floor, see the unnumbered pieces on Pl. 49<sup>a</sup> and <sup>b</sup>. Beginning at the upper left hand corner, these are in the top row (3 and 4) of slate; in the second row (1) of fine volcanic ash, (2) of black limestone (?), (3) of black basalt, (4) of grey volcanic ash without lip or depression, (5) of volcanic ash with depression but without lip, (6) of brecchia-like volcanic ash, with depression; in the third row, (2) of volcanic ash with ring depression; in the fourth row, (2 and 3) of slate without depression or lip. In Pl. 49<sup>b</sup>, the pieces are all of alabaster. Of these the bowls all have lip and depression except the first and second bowls in the third row. The first of these has neither depression nor lip; the second has a depression but no lip.

**N. 1514.** Similar to 1586, so far as preserved. Axis points 49° east of south. See Map II, and Pl. 27, 28.

The site was occupied by a depression ca. 100 cm deep. The pit was filled with a mass of mud (decayed brick) and gravel. Individual bricks were not distinguishable except in the highest part, see Pl. 27. The mass of mud, the crushing of the lower brickwork, the absence of perpendicular walls (cf. 1581, 1513) are all characteristic of the corbel vault. A careful attempt was made to trace out the dividing walls, but it was impossible. And yet the position of the objects especially at the northern end shows that there were dividing walls. Therefore it is certain that we have a tomb with five chambers covered by groined(?) corbel vaults.

The entrance to the tomb has a wooden lintel similar to 1586; but the brickwork which closes the doorway does not fill the whole length (east-west) of the doorway see Fig. 78.



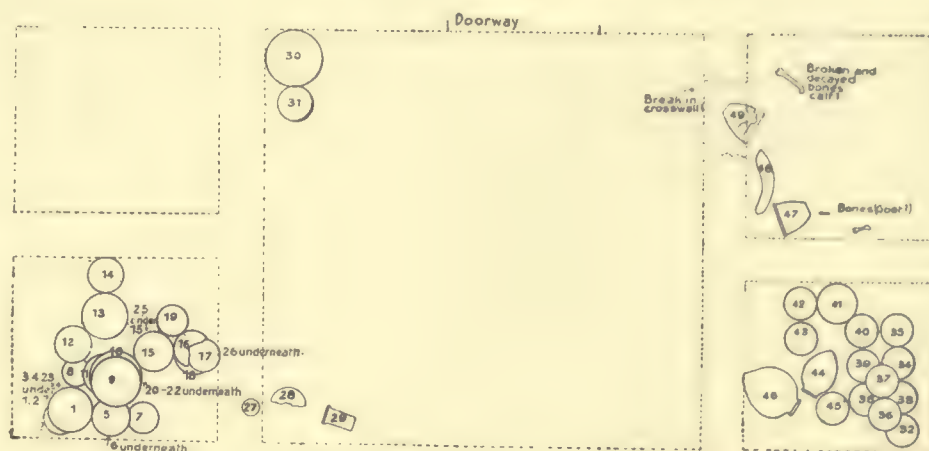
The stairway projects over the southeast corner of the vault of 1584. An unfortunate Coptic burial, it is true, cuts into both the stairway of 1514 and the vault of 1584 at this point; but the break in the stairway extends some 50 cm beyond the break in the vault caused by the Coptic burial. Therefore it is reasonably certain that 1584 was built after 1514.

Traces of superstructure were found on the west and south sides of N. 1514, as shown on Map II, see also Pl. 28 c, d. As in the case of N. 1581 and 1506, this superstructure consists of (1) a central mass with nearly perpendicular faces broken by alternating simple and compound offering niches

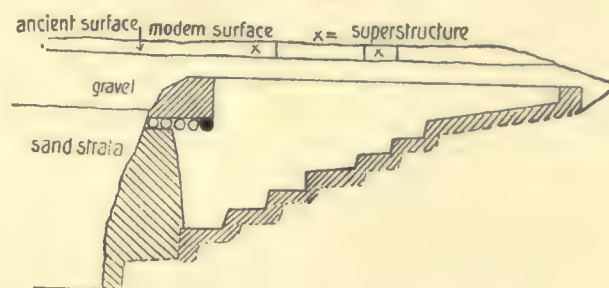
on the southern, western and northern (?) sides and (2) of a low enclosure wall at a distance of 50 cm on the south (and north?) and 80 cm on the west from the face of the central mass. All faces and the floor of the enclosure are plastered with mud and with a thin coat of white plaster. The niches are painted red. Parallel to the enclosing wall, on a level ca. 50 cm below its level, are fragments of a rough wall, not plastered see Map II (marked ||||| on the Map). This wall would naturally be explained as a foundation wall if it were under the enclosing wall. As it stands, it is to me inexplicable. This wall has been utilised as a protection against the loose surface dirt by N. 1532, 1646 and 1583; and may be the remains of subsidiary complexes such as surround the royal tombs. The present state of the walls is no doubt due to *sebbahin*.

Resting on the floor of N. 1514 (see Fig. 77) and undoubtedly belonging to the burial were:

1. Pan of slate, Pl. 48<sup>b</sup>, with depression. Rim broken. Under 1 were 2, 3, 4, 23, 24.
2. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Broken (all found). Found under 1.
3. Bowl of breccia-like volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Found under 2 (1). Ash filled with light green cubes of harder stone.
4. Bowl of slate, Pl. 48<sup>b</sup>, with depression. Whole. Found under 3 (2, 1).
5. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Under it was 6.
6. Bowl of alabaster, Pl. 48<sup>b</sup>. Whole.



77. N. 1514. Position of objects in tomb, 1:50.



78. N. 1514. Section of stair, 1:100.



79. N. 1514. Section of stair, 1:100.



80. N. 1514. Section of stair, 1:100.



7. Bowl of alabaster, Pl. 48<sup>c</sup>, without depression.
8. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole.
9. Bowl of alabaster, Pl. 48<sup>c</sup>. Broken (all found). Under 9 were 10, 11, 20, 21, 22.
10. Plate of slate, Pl. 48<sup>b</sup>, with round bottom, without lip or depression. Found under 9. Whole.
11. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Round bottom. No lip. Found under 11 (10, 9). Edge broken.
12. Bowl of slate, Pl. 48<sup>b</sup>, with depression. Round bottom. No lip. Broken (all found).
13. Plate of slate, Pl. 48<sup>b</sup>, with depression. Round bottom. No lip. Whole.
14. Bowl of alabaster, Pl. 48<sup>c</sup>, with depression. Whole, but affected by water.
15. Bowl of alabaster, Pl. 48<sup>c</sup>, with depression. Bottom of a separate piece, fastened with fine pinkish cement (plaster). Rim broken. Affected by water. Under it was 25.
16. Plate of slate, Pl. 48<sup>b</sup>. Round bottom. No depression or lip. Broken: half found at 16 and half at 28. Under 16 were 17, 18 and 26.
17. Pan of alabaster, Pl. 48<sup>c</sup>. Without depression or lip. Rim broken. Found under 16.
18. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Found under 17 (16).
19. Bowl of alabaster, Pl. 48<sup>c</sup>. Whole, but affected by water.
20. Bowl of brecchia-like volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Ash, sprinkled with small blocks of harder darker stone. Found under 11 (10, 9).
21. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Found under 20 (11, 10, 9).
22. Lower part of bowl of black-veined fine white limestone (marble?), Pl. 48<sup>c</sup>. Upper part decayed and rest much affected by soaking in water. Found under 21 (20, 11, 10, 9).
23. Bowl of volcanic ash, Pl. 48<sup>b</sup>, with depression. Whole. Found under 4 (3, 2, 1).
24. Cup of alabaster, Pl. 48<sup>c</sup>. Without depression or lip. Found under 23 (4, 3, 2, 1).
25. Bowl of alabaster, Pl. 48<sup>c</sup>, with depression. Whole but water soaked. Found under 15.
26. Bowl of alabaster, Pl. 48<sup>c</sup> (two pieces), with depression. Broken in two, water-soaked. Found under 18 (17, 16).
27. Jar of alabaster, Pl. 48<sup>c</sup>. Whole.
28. Rest of 16.
29. Cylindrical jar of alabaster, Pl. 48<sup>c</sup>. Without cord. Whole.
30. Jar of smooth red ware, type III. H. 40. Broken.
31. Jar of coarse red ware, Pl. 56<sup>a</sup>, type v. H. 30. Vertical scratches on lower part.
- 32—45. Jars of coarse red ware, similar to 31, Pl. 56<sup>a</sup>, type v.
46. Jar of smooth red ware, Pl. 56<sup>a</sup>, type III. H. 37.
47. Pot of brown ware, Pl. 56<sup>a</sup>, type XXI, red painted, dull polish. H. 22.
48. Flint knife, Pl. 40<sup>a</sup>, roughly chipped.
49. Like 47, Pl. 56<sup>a</sup>. Broken.

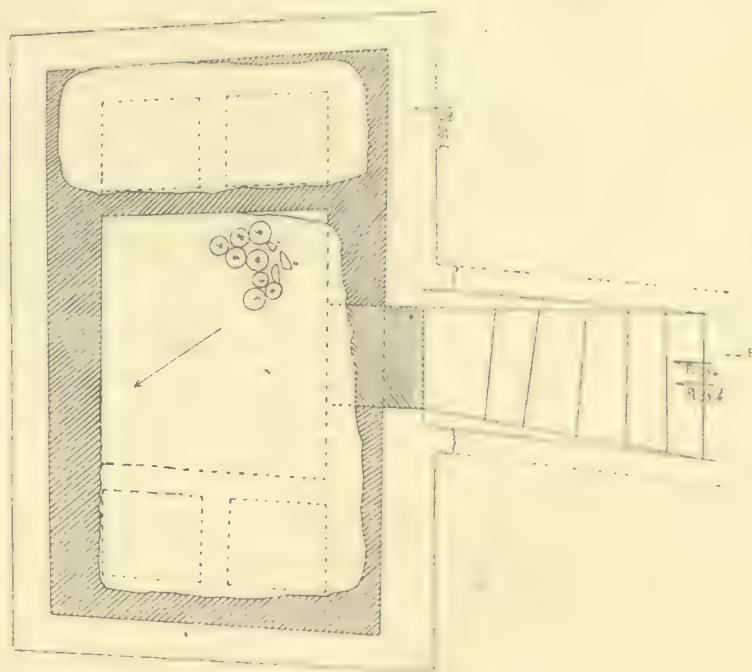
In the dirt near the floor in the northern end were found:

50. A small piece of carved ivory, Pl. 41<sup>c</sup>.
51. A fragment of a mud impression of a cylinder seal, Pl. 43.



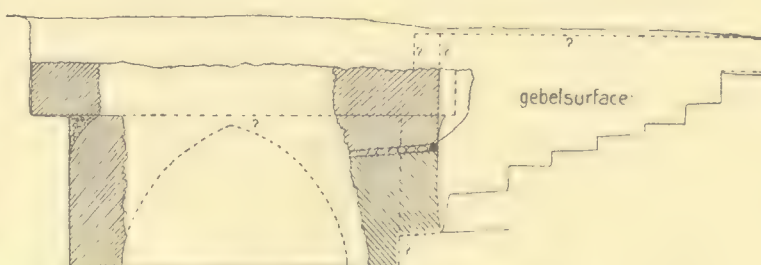
**N. 1515.** Similar to 1586, see Pl. 35<sup>c, d</sup> and 33<sup>b</sup> and Fig. 81, 82. Axis points 55° east of south.

Like all the big tombs, the site of 1515 was marked by an irregular depression made by *sebbahin*. The pit was filled with a damp mass of decayed brick and gravel. The walls themselves were so crushed by their own weight that the individual bricks were distinguishable only in the upper courses. Even the sides of the doorway on the inside of the vault could not be traced. The only surfaces preserved were on the southern end and on the eastern side of the main vault with groin between them. That on the southern end was preserved to a height of ca. 120 cm; and to keep it from falling, it was necessary to leave the dirt underneath to support the underside of the vault. These bits of corbel and groin show conclusively that N. 1515 consisted of five chambers covered by groined corbel vaults.



81. N. 1515, plan, 1:100.

In building the roof, at about 200 cm above the floor, the make-weight was not built out to the *gebel*, but a certain space was (hurriedly?) filled with gravel, see Pl. 35<sup>d</sup> and Fig. 82. The stairway had no flanking walls except for about 40 cm next to the doorway. The rest of the stair was cut in the *gebel*; and the *gebel* was plastered with mud.



82. N. 1515, section A-B, 1:100.

The doorway, owing to the crushing of the bricks, was not clearly defined inside. But outside across the front at a height of ca. 80 cm there was a line, see Pl. 35<sup>c</sup>, like that caused by a wooden lintel. On stripping away the mud plaster, the wooden beam appeared, see Pl. 33<sup>b</sup>. The brick-work below is the seal or stopper to the doorway.

In the tomb, in the southwestern corner of the main chamber on the floor were found the following objects:

1. Half of bowl of alabaster, Pl. 50<sup>b</sup>. The rest of the bowl at 3.
2. Bowl of volcanic ash, Pl. 50<sup>b</sup>, with depression. Broken (all found).
3. See 1.
4. Bowl of alabaster, Pl. 50<sup>b</sup>, with depression. Broken (all found).
- 5—10. Plates of brown ware, red painted, line polish, type xxvi. Lines cross face of plate. Diam. 23 cm (no. 7) to 30 cm (no. 10).



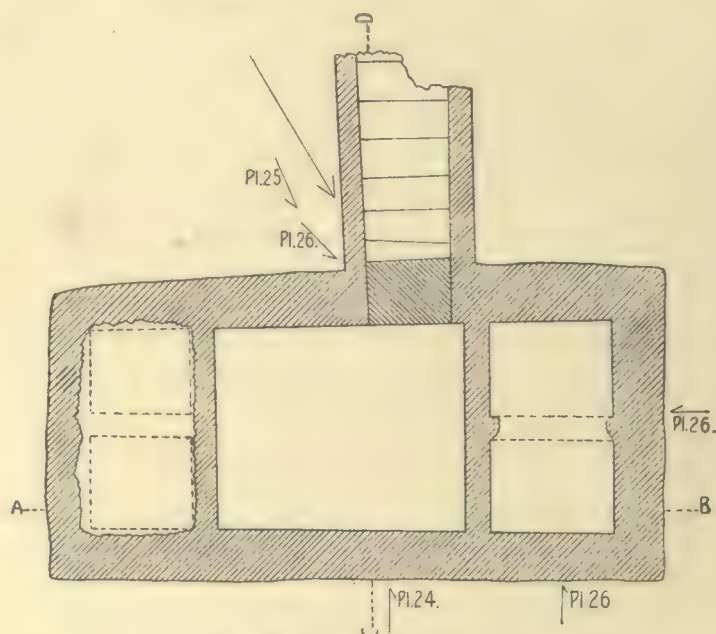
In addition the following were found in the lower part of tomb in the part corresponding to the northeastern chamber:

11. Bowl of alabaster, Pl. 50<sup>b</sup>, with depression. No lip. Broken (all found).
12. Flint, Pl. 40<sup>b</sup>.
13. Cylindrical jar of alabaster, Pl. 50<sup>b</sup>, without cord. Rim broken.
14. Pieces of bowls of brown ware, red painted, line polished, type xxiv<sup>a</sup>.
15. Fragments of red ware, red painted, type xxi.
16. Fragments of jars of coarse red ware with vertical scratches, type v.

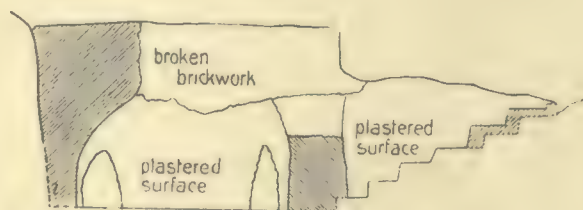
Higher up mixed with surface dirt were found fragments of red ware and red polished ware of Middle to New empire types and a light green ring with the name of *Ti*. Near these was a rubbing stone of dark green stone, smeared on one side with green paint. At about 200 cm from these, above the southern end of the tomb were found two fragments of a rough slate palette and a coarse pottery bowl, type xxix<sup>3</sup>.

N. 1513. Similar, so far as preserved, to 1586, see Pl. 24, 25, 26 and Fig. 83—87. Axis points 59° east of south.

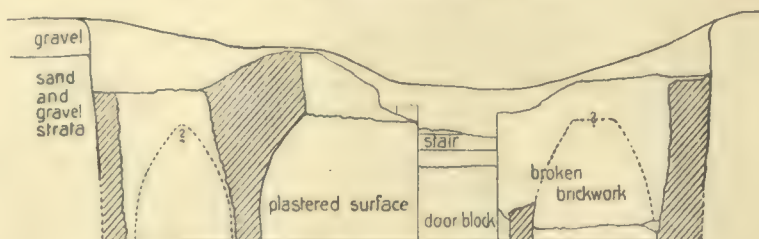
The site was occupied by a depression ca. 2 meters deep. Below this was a wet mass of gravel and decayed mud brick. Even in the mass of the heavy wall of the corbel the forms of the individual bricks were preserved only in the upper part; below the brickwork was compressed to a solid mass of mud, see Pl. 26<sup>b</sup> and <sup>c</sup>. The grave had probably been entered through the roof of the main vault and plundered. Whether the thieves broke the vault or whether they found the vault caved in, the subsequent decay of the vault is clear. In the course of the annual wetting and drying, vertical cracks were formed in the vault and sifted full of gravel and sand from above, see cracks shown on left side of Pl. 26<sup>c</sup>. These cracks grew deeper and wider until the weight of gravel caused the unsupported flake of brickwork to fall inside the vault bringing with it a certain amount of gravel. At the same time the grave was slowly filling up with gravel and sand trickling in from the opening. This process continued



83. N. 1513, plan, 1:100.



84. N. 1513, section A—B, 1:100.



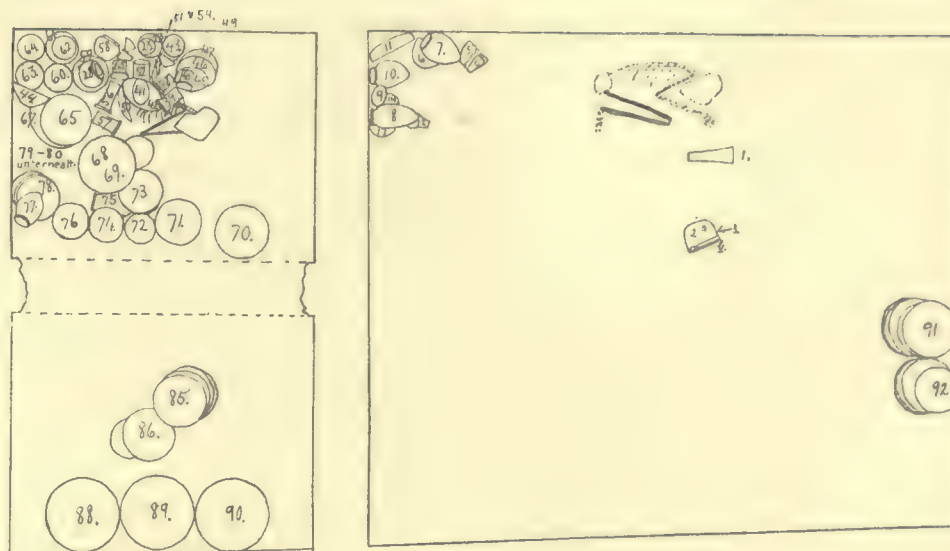
85. N. 1513, section C—D, 1:100.



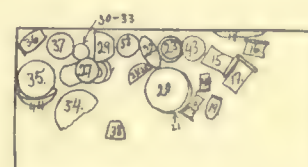
until the grave was so filled up as to offer the rest of the vault a support. The result was that some of these flakes fell off after we had removed the dirt from the underside. Plates 24 and 25 show the tomb after clearing out all debris. In Pl. 24, the stairway also has been cleared and part of the stone vessels in the northeast corner removed. The southern pair of chambers were empty. The vault above them had sunk in; and the south end of the tomb was a solid mass of mud.

The following objects were found in the tomb, see Fig. 86, 87:

1. A copper blade, Pl. 40<sup>c</sup>, below, thick and heavy (not a mere model). This was found about 10 cm above the floor at the spot marked with a limestone chip on Pl. 25.
- 2a. A copper axe blade, Pl. 40<sup>c</sup>, above on the left, capable of practical use.
- b. A copper blade, Pl. 40<sup>c</sup>, on the right, above.
3. A copper chisel, showing marks of hammering on the blunt end, Pl. 40<sup>c</sup>, on the right, middle.
4. Alabaster jar, Pl. 46<sup>b</sup>. Whole, but affected by water.
5. 6. Bowl of volcanic ash, Pl. 46<sup>c</sup>. Broken.
7. Jar of coarse red ware, Pl. 56<sup>b</sup>, type v. Vertical scratches on base. H. 35.
8. Like 7, type v.
9. Bowl of fine pink, red-veined limestone, Pl. 47<sup>a</sup>. Broken.
10. Like 7, type v.
11. Bowl of alabaster, Pl. 47<sup>a</sup>. Broken (all found).
12. Pot of brown ware, Pl. 46<sup>b</sup>, red painted, line polished, type xx1. Diam. ca. 24, h. ca. 19.
13. 14. Like 7, type v.
15. Cylindrical jar of clear alabaster, Pl. 47<sup>b</sup>. Raised cord, style *a*. Whole.
16. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With raised cord, style *c*. Whole.
17. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With raised cord, style *c*. Whole.
18. Pan of slate, with veins like volcanic ash, Pl. 46<sup>b</sup>. Depression inside in bottom. Broken (all found).
19. Jar of alabaster, Pl. 46<sup>b</sup>. Whole.



86. N. 1513. Position of objects in tomb, 1:50.



87. N. 1513. Position of upper layer of vessels in NE chamber, 1:50.



20. Slate pan, Pl. 46<sup>b</sup>. With depression. Broken.
21. Bowl of alabaster, Pl. 47<sup>a</sup>. With ring. Whole.
22. Oval bowl of slate, Pl. 46<sup>b</sup>. Length 16, width 10.5, h. 7.5 cm. With depression. Whole.
- 23a. Jar of alabaster, Pl. 46<sup>b</sup>. Found in *b*. Whole.
- b. Cylindrical jar, of alabaster, Pl. 47<sup>b</sup>. Whole.
24. Bowl of alabaster, Pl. 47<sup>a</sup>. Whole.
25. Bowl with spout, Pl. 47<sup>a</sup>, of calcareous alabaster. Found inside 24. Spout broken off.
26. Bowl of slate, Pl. 46<sup>b</sup>, with depression. Badly shattered.
27. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Whole.
28. Jar of alabaster, Pl. 46<sup>b</sup>. Whole.
29. Bowl of hard white limestone with pink stains, Pl. 47<sup>a</sup>. Broken (all found).
30. Small bowl of alabaster, Pl. 47<sup>a</sup>. Cracked.
31. Saucer of alabaster, Pl. 47<sup>a</sup>. Whole.
32. Small bowl of alabaster, Pl. 47<sup>a</sup>. Whole.
33. Bowl of white limestone, Pl. 47<sup>a</sup>. Broken.
34. Bowl of alabaster, Pl. 47<sup>a</sup>, with depression. Water soaked, rim broken.
35. Jar of alabaster, Pl. 46<sup>b</sup>. Whole.
36. Jar of alabaster, Pl. 46<sup>b</sup>. Whole, affected by water.
37. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>, without cord. Whole.
38. Cup of hard volcanic ash, Pl. 46<sup>b</sup>, with depression. Whole.
39. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With sunk cord in relief, style *a*. Whole.
40. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord, style *a*. Whole.
41. Bowl of white limestone, Pl. 47<sup>a</sup>. With depression. Whole.
42. Oval bowl of alabaster, Pl. 47<sup>a</sup>. Length 23.5, width 16, h. 11.
43. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Rim broken.
44. Bowl of volcanic ash, Pl. 46<sup>b</sup>, with depression. Rim broken.
45. Shallow bowl of alabaster, Pl. 47<sup>a</sup>. Broken (all found).
46. Bowl of dark-veined volcanic ash, Pl. 46<sup>b</sup>, with depression. Broken (all found).
47. Bowl of dark-veined volcanic ash, Pl. 46<sup>b</sup>, with ring depression. Broken (all found).
48. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord, style *a*. Whole.
49. Small bowl of pink red-veined limestone, Pl. 47<sup>a</sup>. Whole.
50. Fragment slate pan like 20 and 26.
51. Fragments of alabaster bowl, Pl. 47<sup>a</sup>, with depression.
52. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord, style *a*. Whole.
53. Jar of alabaster, Pl. 47<sup>b</sup>. Whole.
54. Bowl of light blue volcanic ash, Pl. 46<sup>b</sup>, with depression. Whole.
55. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord, style *c*. Whole.
56. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
57. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
58. Jar of alabaster, Pl. 46<sup>b</sup>. Whole, but water-soaked.



59. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord, style *c*. Whole.
60. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
61. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
62. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
63. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
64. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. Without cord. Whole.
65. Bowl of alabaster, Pl. 47<sup>a</sup>. Depression. Rim broken.
66. Cylindrical jar of alabaster, Pl. 47<sup>b</sup>. With cord style *b*. Whole.
67. Bowl of brown ware, Pl. 56<sup>b</sup>, red painted, vertical line polish inside, type xxv. Broken.
68. Plate of brown ware, Pl. 56<sup>b</sup>, red painted, line polished, type xxvi. Lines cross face of plate. Diam. 34.
69. Like 68, type xxvi. Diam. 36.
70. Like 67, type xxv. Diam. 30, h. 13. Coals in dirt beside it.
71. Jar of smooth reddish ware, type iii. H. 40.
72. Jar of coarse red ware, type viii, Pl. 56<sup>b</sup>. H. 19.
73. Like 7, type v. H. 32.
74. Like 72, type viii. H. 20.
75. Like 72, type viii. H. 18. Broken.
76. Jar of coarse red ware, type viii, Pl. 56<sup>b</sup>. With white surface (due to accidental action of salt or other mineral?). H. 25.
77. Like 7, type v.
78. Like 91, type xxvi. All broken.
79. 80. Like 76, type viii.
81. Jar of smooth brown ware, Pl. 56<sup>b</sup>, red painted, type ix. Bottom not flat. Cracked.
82. Jar of coarse red ware, Pl. 56<sup>b</sup>, type vi.
83. Like 76, type viii.
84. Like 81, Pl. 56<sup>b</sup>, type ix.
85. Stack of five flat pans like 91, type xxvi. Broken.
86. Stack of three flat pans like 91, type xxvi. Broken.
87. Small pot of brown ware, Pl. 56<sup>b</sup>, red painted, line polish, type xxi<sup>b</sup>. Fire stained and broken.
88. Jar of brown ware, Pl. 56<sup>b</sup>, red painted, smooth, type iii. Pot mark, see Pottery, type iii.
89. Like 88, type iii.
90. Jar of brown ware, Pl. 56<sup>b</sup>, red painted smooth, type iii. Pot marks, see Pottery, type iii.
91. Stack flat pans, of brown ware, Pl. 56<sup>b</sup>, red painted, line polish, type xxvi. Lines cross inside of plate.
92. Stack of three bowls, Pl. 56<sup>b</sup>, of brown ware, red painted, line polish (vertical lines inside), type xxv, and two pans like 91, type xxvi.

In addition a number of fragments of alabaster and volcanic ash were found in the debris of the tomb, see the unnumbered pieces Pl. 46<sup>b</sup> and Pl. 47<sup>a</sup>.

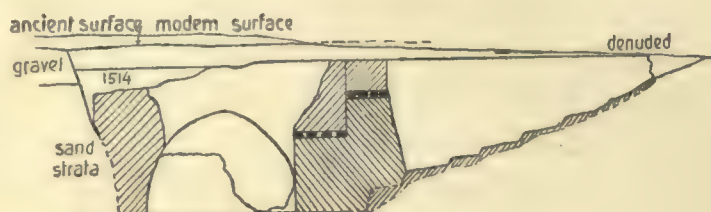


Two skeletons were found in the tomb, one in the main chamber (*c*) and one in the northeastern chamber (*b*). Both were crushed and rotten, but both were certainly contracted on the left side with the head to the south (local), see Pl. 25 and 26<sup>b</sup>. About the neck of the skeleton in chamber *b*, were black and white cylindrical beads, like the second necklace from the bottom Pl. 42. Above the skeleton in the main chamber (ca. 20 cm), was found a slate bracelet, Pl. 41<sup>b</sup>.

The distribution of the objects in the grave present the same appearance of plundering which we had in 1581 and similar to that in 1532; and similarly two chambers are empty, here the south chambers while in the case of 1581 the north chambers were empty. It could not be determined whether these chambers were originally empty or had contained, as seems more probable, perishable objects and materials.

**N. 1584.** Similar to 1586, but with only one chamber at each end, see Pl. 29, 30, Map II and Fig. 88, 89. Axis points 49° east of south.

The site was as usual occupied by a depression; and the grave was filled with wet mud and gravel. The east end of the southern chamber however was only three-fourths full of dirt. This grave is the smallest stairway grave of this type found (see however the imitative corbel, N. 1611); and its floor is on a higher level than any of the stairway tombs described above.

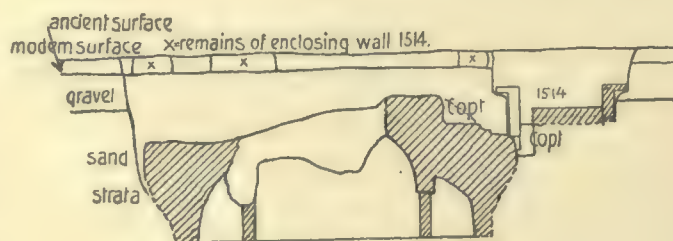


88. N. 1584. Section east-west, 1:100.

Therefore, the brick work is better preserved than in the other graves of this type.

The pit contains three chambers covered by three corbel vaults with rounded corners. The brickwork is extremely careless. The inner face of the corbel consists of alternate courses of headers and stretchers, see Pl. 30<sup>d</sup>. Behind the face, the wall is packed for the most part with carelessly laid headers; but stretchers were freely used especially to even out the alternate courses on the surface next to the *gebel*. The outside walls at the bottom were at least 1 brick thick.

The dividing walls are  $\frac{1}{2}$  brick thick, all stretchers overlapping. The southern dividing wall alone is well preserved. It is *not bonded* with the outside wall from the bottom up to the tenth course. The corbel begins, so far as the dividing wall is concerned, with the eighth course. Thus the first two corbel courses of the dividing wall are not bonded with the main corbel.



89. N. 1584. Section north-south, 1:100.

The eight lower courses in the dividing wall either owing to a depression in the floor, or to closer laying, do not attain the height of the corresponding eight courses in the main wall. So the ninth course (second corbel course) consists of *bricks on edge* bringing the top of the ninth course of the dividing wall level with the top of the ninth course of the outside wall, see Pl. 30<sup>a</sup>. The plastering of the dividing wall is uniform with that of the main vault. Therefore, certainly the dividing wall



on the south end, and judging from the remains probably that on the north end also, was an afterthought (possibly made necessary by an unexpected weakness of the vault) and was not begun until course nine of the main vault had been laid.

The entrance is approached from the valley side by steps cut in the *gebel* and plastered. The sides of the stairway are lined with walls  $\frac{1}{2}$  brick thick (overlapping stretchers); but the tops of these two walls consist of a header course doubling the width of the top. The outer end of the stair and the top of the southern side wall have been cut away by *sebbahin* or Copts.

The doorway itself is built in two sections, see Fig. 88, both covered with wooden saplings. That part of the vault which is above the doorway rested on the wooden roof of the lower section. The brick lintel of the doorway rested on the wooden roof of the upper section.

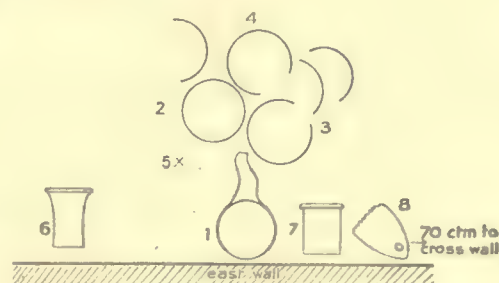
Owing to the denudation of the surface, no evidence as to superstructure was available.

The northwest corner of the stairway of 1514 would if complete extend over the vault of 1584. Both the stairway of 1514 and the vault of 1584 were broken at this point by a Coptic burial. The stairway is broken away for about 50 cm beyond the burial. If this break was made as seems probable by the builders of 1584, then 1584 is later in date than 1514,—a theory made plausible by the relative position of the two tombs.

On the floor of the tomb were found the following objects, see Fig. 90:

1. Ivory ladle, Pl. 41<sup>b</sup>. Tip of handle missing.
2. Slate bracelet, Pl. 41<sup>b</sup>, second from the left.  
Piece missing.
3. Flint bracelet, Pl. 41<sup>b</sup>, on the left.
4. Fragments of at least 3 ivory bracelets and two fragments of a flint bracelet, Pl. 41<sup>b</sup>; right half of second row.
5. Beads of garnet, Pl. 41<sup>a</sup>, *a*; of carnelian and glazed steatite (?), glaze worn off, Pl. 41<sup>a</sup>, *b*.
6. Small cylindrical jar of alabaster, Pl. 41<sup>c</sup>. Whole.
7. Small cylindrical jar of volcanic ash, Pl. 41<sup>c</sup>. Whole.
8. Comb (?) of slate, Pl. 41<sup>c</sup>.

9. 10. Jars of coarse red ware of type v (found in the southern chamber). With vertical scratches on lower part.



90. N. 1514. Position of objects found, 1:10.

**N. 1572.** Similar to 1586 but with two chambers at one end, see Map 1. Axis points about 43° east of north.

The site was as usual marked by a depression. The substructure was filled with a mass of mud and gravel. The chambers in the east end were inferred from the pots which were in the north chamber and from the bones of an offering animal (calf?) which were in the south chamber; for the structure itself was simply a solid mass of melted brickwork. Only the stairway is well preserved.

The stairway descends to the entrance from the north and consists of mud brick steps laid on *gebel*. The sides are lined with walls  $\frac{1}{2}$  brick thick (overlapping stretchers).

The doorway is roofed with wooden logs and blocked with brickwork.

The surface had been denuded leaving no evidence of superstructure.



This tomb is built close to 1571 across the place formerly occupied by the stairway of 1571. The stairway of 1571 was probably destroyed to permit the construction of 1572 (cf. 3061 and 3074). The superstructure of 1571, unless it set back further than usual, must have been more or less injured in building 1572. The superstructure of 1572 must have been built against that of 1571 but avoiding, as was to be expected, the main, or southern, offering place of 1571.

The anomalous position of the stairway on the north side (cf. 1626) is to be explained by the fact that the presence of 1513 prevented the construction of a stairway on the valley side. This points to the fact that 1572 was one of the later tombs built after all the independent sites were occupied. The stairway extended up over the vault of 1605 and was apparently cut away in the construction of 1605. Thus 1572 is clearly later than 1571 and 1513 but earlier than 1605.

On the floor of the main chamber was found the traces of a skeleton (Pl. 31<sup>d</sup>) lying contracted on the left side, head east. At the feet were:

1. Alabaster cylindrical jar, with cord, h. 25 cm, diam. 12.
2. Alabaster cylindrical jar, without cord, h. 13 cm, diam. 15.
3. Alabaster jar, type Six<sup>2</sup>, h. 20, diam. mouth 7.5 cm.

In the northern chamber, embedded in the decayed brickwork were:

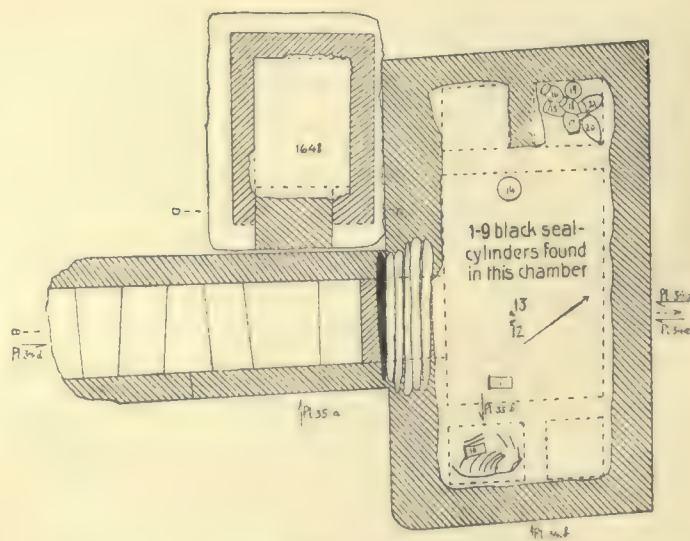
- 4—10. Pots, type v.

In the southern chamber were the bones of an offering animal (calf?).

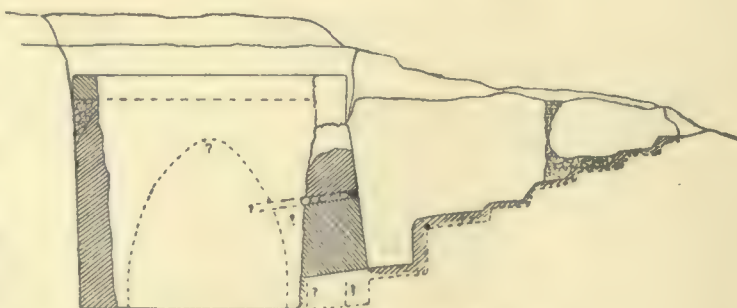
In the dirt of the chamber was found a lot of fragments of stone vessels of alabaster, slate and volcanic ash (Pl. 51<sup>a</sup>).

**N. 1605.** Similar to 1586. Axis points about 54° east of south. See Pl. 34 and 35<sup>a, b</sup>.

The site of this tomb was, as usual, marked by a depression ca. 150 cm deep. The pit was filled with a mass of mud (decomposed brick) and gravel. In the walls the brickwork was so crushed while wet, by its own weight that the individual bricks were indistinguishable. At the north end, I worked myself for several hours, trying to find the dividing walls and the underside of the vault, but in vain, although the position of both was clearly marked by the pottery in the northeast chamber, see Pl. 34<sup>b</sup>. However, the mass of mud in the pit and the distribution of the antiquities are both characteristic of tombs of the type of 1586. The walls of wooden roof tombs are always better preserved because the wooden roof decays before the brickwork has suffered, thus letting in a mass of sand which not



91. N. 1605. Plan, 1:100.



92. N. 1605. Section A—B, 1:100.



only protects the inner faces but also relieves the wall of the weight above. Therefore it is certain that 1605 was a tomb with five chambers covered with corbel vaults.

The stairway was filled with stones, Pl. 34<sup>c, d</sup>. The steps were of brick. The side walls were 1½ bricks thick, consisting of three stretcher courses backed with headers alternating with one header course backed by stretchers. The doorway was covered by wooden logs as usual.

The surface was so denuded that all evidence on superstructure was wanting.

In the angle between the stairway and the north end of the tomb, there was a small corbel vault (N. 1648, see Pl. 35<sup>a</sup>) with a single chamber and entrance on the south. This was completely plundered with the exception of two pots of the common type (type v). Owing to its position, the stairway of 1605 must have been built across its entrance, and the tomb is therefore earlier than 1605.

In the mud from 5—10 cm above the floor of the main chamber, were found nine small-bore black seal cylinders, Pl. 43. These were found in crushing with the fingers the chunks of mud chipped off the debris just above the floor. After the first one was found, all the dirt from the upper part, which had been carried out, was also worked over but without finding any cylinders. These cylinders received the numbers 1 to 9. On the floor, the following objects were found in position, see Fig. 91:

10. Cylindrical jar of alabaster, Pl. 50<sup>a</sup>, without cord. Found lying on top of the skeleton of a calf(?), Pl. 35<sup>b</sup>. Whole.
11. Cylindrical jar of black basalt, Pl. 50<sup>a</sup>, with fine raised cord type *b*. Broken (all found).
12. 13. Cosmetic dish of slate in the form of a bull's head, Pl. 41<sup>c</sup>. Opens by revolving one-half about a hole through the neck. Whole. Eyes inlaid, shell.
14. Pan of slate, Pl. 50<sup>a</sup>, with depression. Broken (all found).
- 15—21. Jars of coarse red ware, varieties of type v.

The following were also found in the lower stratum of mud:

22. Oval bowl of volcanic ash, Pl. 50<sup>a</sup>, with depression. No lip. Broken, small piece missing from side, h. ca. 18.
23. Fragments of flat slate plate, type S xxvi.
24. Top of cylindrical jar of black basalt, Pl. 50<sup>a</sup>. With cord in relief, style *b*.
25. Fragments of bowl of white limestone, Pl. 50<sup>a</sup>. Without depression or lip. Round bottom.
26. Fragments of bowl of volcanic ash, Pl. 50<sup>a</sup>. Depression and lip.
27. Fragments of flint bracelet, Pl. 41<sup>b</sup>.
28. Fragments of copper needles, Pl. 41<sup>b</sup>.

N. 1626. In construction similar to 1586, but with marked differences. Axis 43° east of south.

The site of this tomb was not marked by any noticeable depression. The tomb was found in searching for small tombs between 1608 and 1581. The roof was nearly intact (Pl. 36<sup>a</sup>, the plaster has been cleared off by me except at southern end); but the roof as well as the door-block showed holes through which thieves may have entered anciently. The interior was completely plundered except for four pots of type v in the northeastern corner of the main

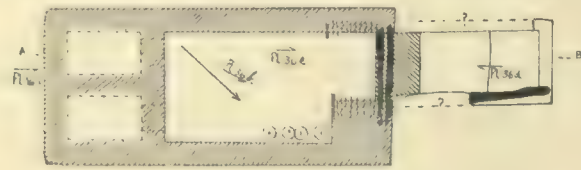


chamber (Pl. 36<sup>b</sup>). The substructure consists of a main chamber and apparently two end chambers on the south end. The main chamber, at least, is roofed with a groined corbel.

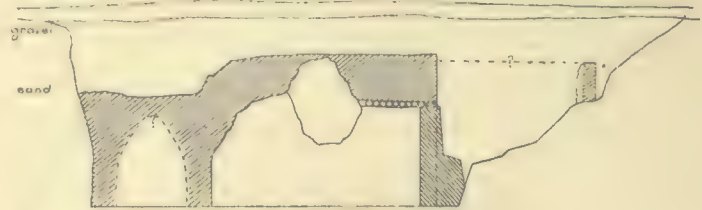
The door is at the north end, roofed with branches (Pl. 36<sup>b, c</sup>, where the cavities containing rotten wood are visible; and 36<sup>d</sup> where the line of plaster across top of door block, covers the wood). The doorway is a truncated corbel arch (Pl. 36<sup>b, c, d</sup>), blocked with brickwork as usual. The approach at present consists of an irregular incline cut in the *gebel* and lined with a  $\frac{1}{2}$ -brick wall which is preserved only at the north end (see Fig. 93, 94) and appears to have been roofed with wood.

On the floor were found:

1—4. Pots, type v.



93. N. 1626, plan, 1 : 100.



94. N. 1626, Section A—B, 1 : 100.

## 6. Small tombs with corbel roof and entrance, type B. 1. a.

The small tombs with a corbel roof and an entrance on the side or end, all lie in the northern part of the cemetery, see Map 1. As this part had been more disturbed than the rest of the cemetery, these graves had all been more or less hacked to pieces in modern times. But 1614 seems to show that there had been ancient plundering as well.

The chamber is oblong, covered by either a round cornered (1619) or a groined corbel. In only one case were there end chambers (1611; see however N. 3022 and 3014). The entrance is usually approached by a sloping trough cut in the *gebel*. The lintel of the doorway is of wood.

When work began, this part of the cemetery was covered with heaps of gravel from the *sebah* sieves, broken Coptic bones and other cemetery refuse. After this uneven layer had been removed, the *gebel* surface underneath was found very much broken especially in the vicinity of the graves. At no point was the upper stratum which was recovered in the middle and southern parts of the cemetery, found preserved in the northern part. And immediately about the graves the *gebel* was usually cut down to a hard black stratum of silt which is found at a depth of 50 to 100 cm below the surface in all the land tips between the second and the third ravines.

Furthermore, the shallowness of the Coptic graves which are here only 40—60 cm deep instead of 100—160, shows that the surface in Coptic times was considerably higher than at present.

Therefore it is certain that the *gebel* surface of the first dynasty must have been from 50 to 100 cm, above that now preserved. And therefore the truncation of vaults is due to the destruction of the upper strata of the *gebel*. It is not to be assumed that these vaults were partly above ground. Bearing on this point, it may be added (1) that the vaults show no trace of plastering or finishing on the outside, (2) that they are never higher than the *gebel* about



them, (3) that the entrance passages extend upward as far as the gebel is preserved and are in all cases *incomplete* and (4) that the allowance of 50—100 cm for denudation would permit the supposition that all vaults were complete beneath the surface of the second dynasty.

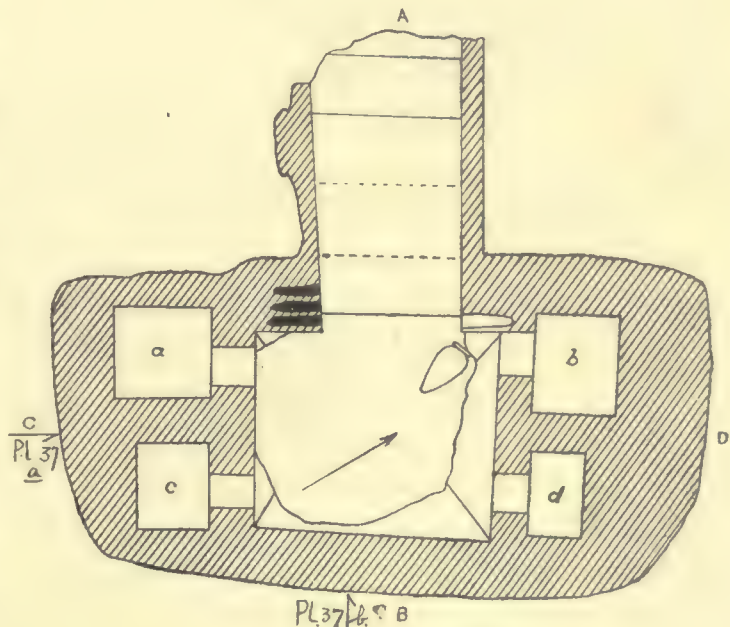
These tombs present features which are apparently copied from the large corbel vault. For the first time we find small tombs, of a size which in wooden roofed tombs could easily have been entered from above, entered from the side or end. Assuming that the corbel vault was desired on account of cheapness, the form with a stair could only have been adopted because the corbel was already in use for big tombs with stairs. It is probable that at this time, the 'corbel vaulted stairway tomb' had become the prevailing type and was therefore copied in the smaller tombs. This is especially evident in tombs like 1611 (3022, 3014) where even the end chambers are copied as useless rudimentary compartments.

The tombs of this imitative type are 1611, 1612, 1614, 1613, 1562, 1619, 1648, 1633, 1622, 1630. These tombs, just as in cem. 3000, utilize usually the slope of the ground to facilitate the approach of the sloping passage to the entrance. The entrance is on the side towards the low ground.

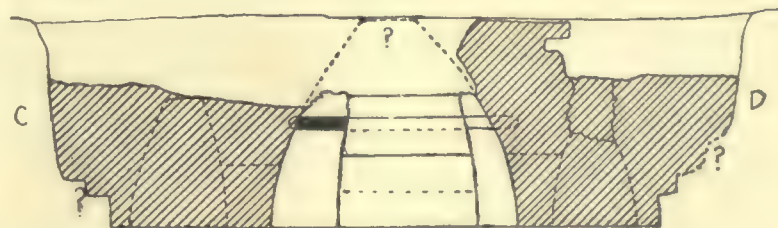
**N. 1611.** Rectangular pit containing stairway tomb of mud brick with vaulted roof and two chambers at each end, see Pl. 37<sup>a, b</sup>. Owing to its size and position on the edge of the slope of the ravine, I have included this tomb with the class of imitative small tombs with entrance. The axis points 35° east of north. The stairway enters from the slope of the ravine, —i. e. from the north.

The end chambers as well as the central chambers are roofed with a groined corbel vault. The end chambers are connected with the central chamber by plastered doorways also roofed with a corbel arch.

The brickwork was inaccessible except on the south side of the central chamber. Here the wall began with 3 overlapping stretcher courses, then there were one header and 3 stretcher courses. The eighth to the sixteenth courses were alternately header and stretcher courses. The corbel vault sprang from about the fourth course. Behind the surface bricks of all courses above the fourth, the bricks were all headers.



95. N. 1611, plan, 1:50.

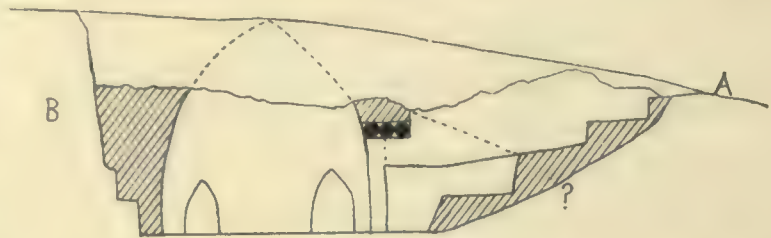


96. N. 1611. Section C-D, 1:50.



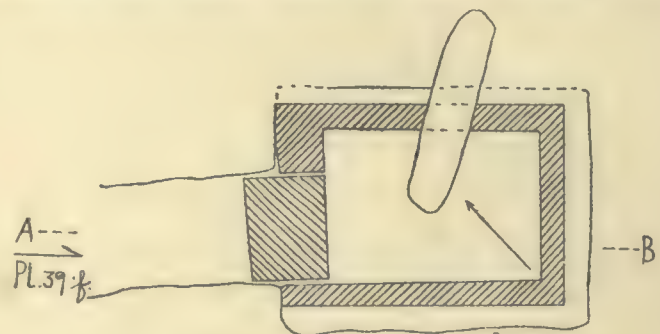
The stairway consisted of four mud-brick steps descending between mud-brick retaining walls. The doorway was roofed with wood and blocked with brickwork.

The tomb was completely plundered; and the surface had been cut to pieces by Coptic burials and by *sebbahin*. On the floor of the central chamber was a single pot (type v). In chamber *a* were fragments of a limestone dish without rim: in *c* were the remain of a skull: and in *d* was a fragment of a human femur (?) and a fragment of a red line-polished bowl. In the dirt was a fragment of dull black-top red polished ware, two small saucers of brown ware and a fragment of a *majur* of red painted ware.



97. N. 1611. Section A-B, 1:50.

**N. 1612.** A rectangular pit cut in the hard alluvial strata, see Pl. 39<sup>e</sup>. Axis points ca. 47° east of south. The pit lies on the northern edge of the alluvial slope on which the cemetery is situated. The vault above touches the east side of the vault of 1611 so that it is probable that the two are nearly contemporaneous.



98. N. 1612. Plan, 1:50.

The walls below are for three courses  $\frac{1}{2}$  brick thick (all stretchers). Above that so far as preserved, they are 1 brick thick. In the south wall courses 4 and 5 from below consist of stretchers; 6 consists of headers; 7 of stretchers; and 8—12 consist of headers. The other walls vary slightly, as the binding at the corners is not uniform. The surfaces of the walls and doorway inside are plastered.



99. N. 1612. Section A-B, 1:50.

The doorway is approached by a sloping descent cut in the gebel and is blocked with bricks. The stratum of black *gebel* is on a level with the top of the south wall,

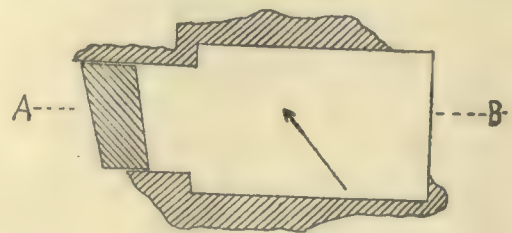
but the top of the descent to the entrance terminated, perhaps, at a point on the slope lower than the top of the vault. The lintel of the doorway was probably of wood, cf. 1619.

In the dirt were found some fragments of vessels of alabaster and limestone, see Pl. 37<sup>b</sup>; but it is uncertain whether they belong to this tomb or to 1611.

**N. 1613.** Similar to 1612. Axis points 50° east of south. Walls, from bottom, 1 brick thick, stretchers with occasional header course. Grave almost entirely destroyed. See Fig. 100 and 101.



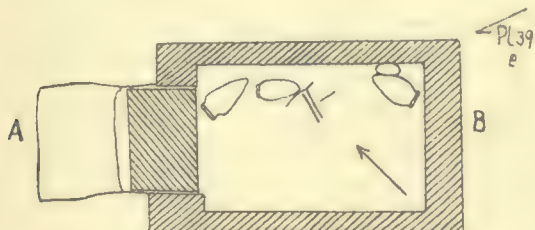
101. N. 1613, Plan, 1:50.



100. N. 1613. Plan, 1:50.



**N. 1614.** Similar to 1612, see Pl. 39<sup>f</sup>. Axis points 45° east of south. Groined corbel vault. Walls on sides  $\frac{1}{2}$  brick, on ends 1 brick thick.

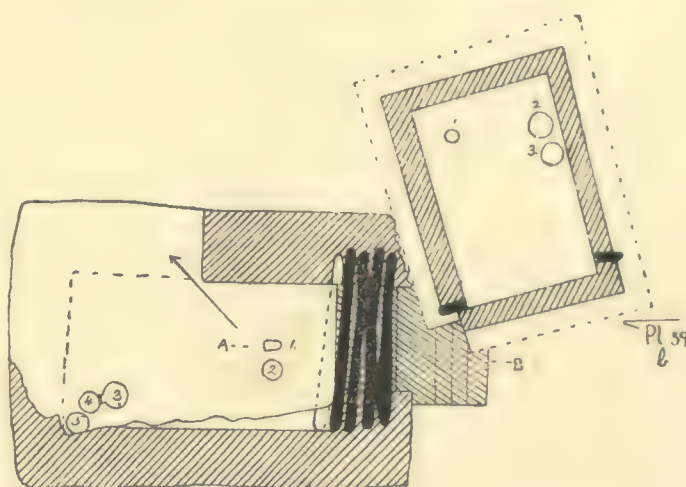


102. N. 1614 Plan, 1:50.



103. N. 1614. Section A—B, 1:50.

**N. 1562.** Similar to 1612—1614, see Pl. 39<sup>d</sup>. Axis points 46° east of south. Covered by a groined (?) corbel vault. The base of walls are  $1\frac{1}{2}$  brick thick to a height of about 50 cm. At this point begins the make-weight of the corbel vault increasing the thickness of the wall by about 25 cm. The make-weight rests on *gebel*. The brickwork has melted into a solid mass of mud. Owing to the destruction of the northern end of the tomb by *sebbahin*, it is impossible to determine whether there were end chambers or not.



104. N. 1562 and 1616. Plan, 1:50.

The doorway is roofed with tree branches in a natural state. It is approached by a sloping trough cut in the desert, and blocked with brickwork.

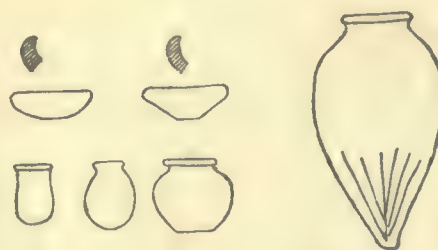
Plundered. N. 1616 was built across the SE corner cutting into the brickwork and was therefore built later than 1562, see Pl. 39<sup>d</sup>.

On the floor of the tomb were found:

1. Small pot of smooth pink ware, type xvii, Pl. 51<sup>b</sup>.
2. Alabaster pot, Pl. 51<sup>b</sup>.
3. Alabaster saucer, Pl. 51<sup>b</sup>.
4. Small pot of pink ware, type xvi, Pl. 51<sup>b</sup>.
5. Limestone saucer, Pl. 51<sup>b</sup>.
6. 7. Jars of coarse ware, type v, Pl. 51<sup>b</sup>.
8. Black seal cylinder, Pl. 43<sup>k</sup>.
9. Beads: string of cylindrical beads of grey steatite (?) and limestone (?); one shell pendant. See Pl. 42, 1.



105. N. 1562. Section A—B, 1:50.



106. N. 1562, Pottery.

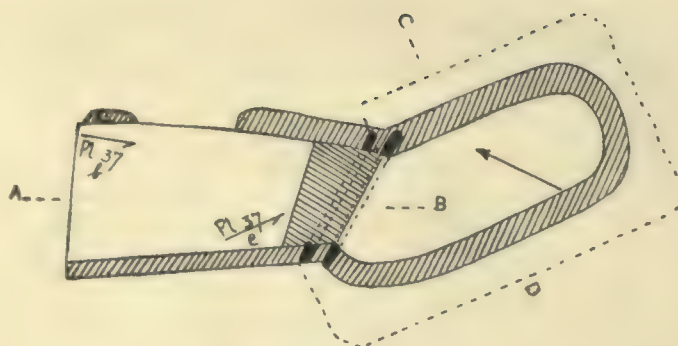
**N. 1619.** Similar to 1612—1614, see Pl. 37<sup>c-d</sup>. Axis points 48° east of south. There is a single chamber with *rounded* corners covered by a corbel vault springing from the third or fourth



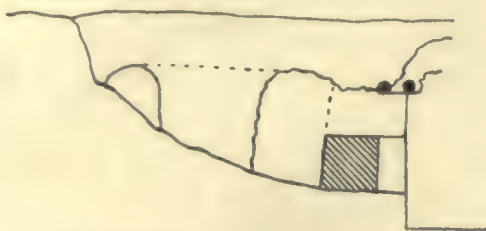
course. The lower part of the walls is  $\frac{1}{2}$  brick thick to a height of about 40 cm. Here the wall thickens so as to form a make-weight to the corbel vault.

The doorway is at the NE corner. It is roofed with wood and blocked with brickwork. The approach is a plastered incline between two brick retaining walls and ends at the door in a single step.

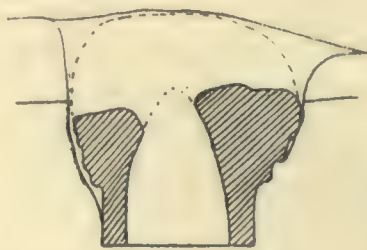
Completely plundered. Apparently built after 1618 (1501).



107. N. 1619. Plan, 1:50.



108. N. 1619. Section A-B, 1:50.



109. N. 1619. Section C-D, 1:50.

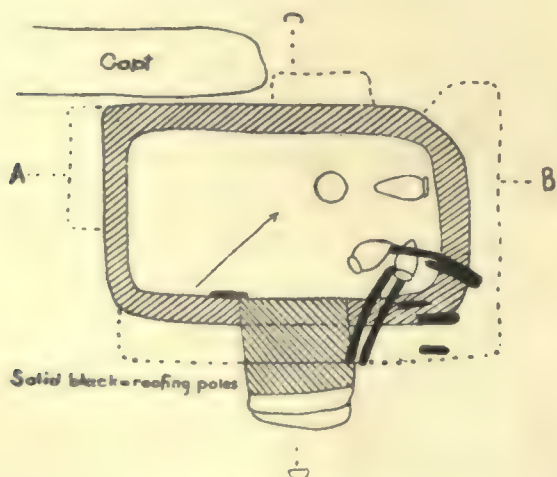
**N. 1648.** Similar to 1562, see Pl. 35<sup>a</sup>, 39<sup>a</sup> and Fig. 91. Axis points 53° east of south. This tomb stands in the angle between the stairway of 1605 and the northern part of the vault of 1605 (see 1605). The northern retaining wall of the stairway of 1605 passes immediately in front of the entrance block of 1562. It is therefore certain that 1648 is earlier than 1605 which from its position is either the latest or next to the latest large tomb in the cemetery.



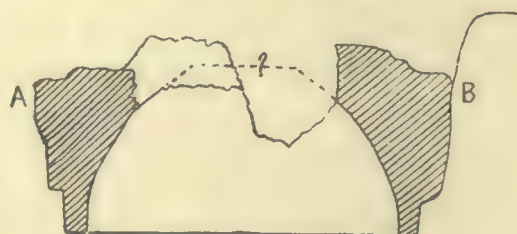
110. N. 1648. Section C-D, 1:50.

Plundered. On the floor were two pots of type v.

**N. 1633.** Similar to 1562 but with entrance on *south side*, see Pl. 39<sup>b</sup>. Axis points 44° east of north. Single chamber covered by corbel vault with *rounded corners*. The wall is for three



111. N. 1633. Plan, 1:50.



112. N. 1633. Section A-B, 1:50.



113. N. 1633. Section C-D, 1:50.



courses from bottom,  $\frac{1}{2}$  brick thick, all stretchers: above, the wall thickens to form make-weight of corbel. The mud plaster is pressed into the corners made by the courses of brick in the corbel (see fig. 114) thus giving the inner surface a ribbed appearance.

The threshold of the door is at the top of the third course. The doorway is roofed with wood, supporting corbel above, and approached by a steep rough trough in gebel. It is blocked with brickwork.

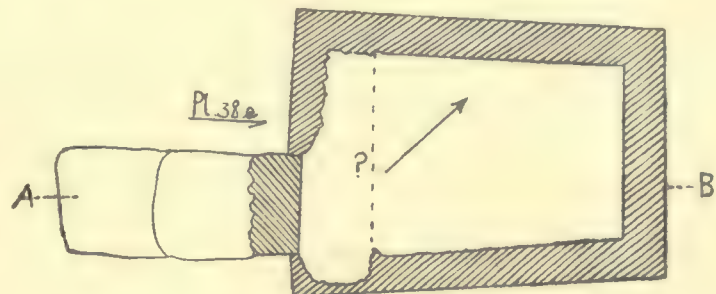
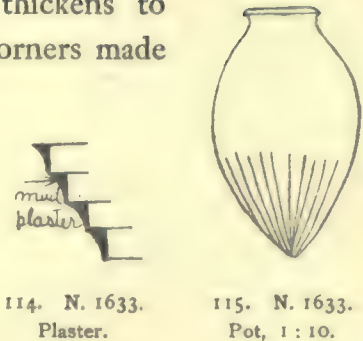
Plundered and cut by Coptic graves. On the floor were four pots of type v.

N. 1622. Nearly rectangular pit cut in the alluvial strata, Pl. 38<sup>c</sup>.

Axis points ca. 48° east of north (west of south?). Covered by a corbel vault the corners of which are rounded off above 50 cm by laying bricks radiating around corner. Bricks in make-weight laid very carelessly and irregularly. Doorway on the valley (or west side) approached by a sloping passage cut in gebel. Roofing of doorway uncertain. Doorway blocked by mud bricks.

In the dirt near the floor were found the pots shown in Pl. 55<sup>b</sup>:

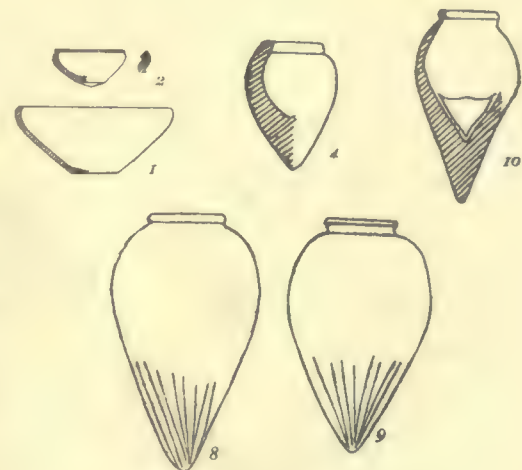
1. Bowl of red painted brown ware, line polished, type xxiv<sup>a</sup>. Horizontal lines on rim inside and out: vertical lines inside. Diam. ca. 22, h. 9.
2. Bowl of hard baked red ware, painted red inside and on rim, type xxi<sup>c</sup>, 4.
3. Like 1, type xxiv<sup>a</sup>.
- 4—7. Jars of coarse red ware, type vii.
8. Jar of coarse red ware, contents river sand and small univalve shells, type v. Vertical scratches below.
9. Jar of red painted brown ware, type v. Vertical scratches below.
10. Jar of hard coarse red ware, type vi, thick bottom like 7. Contents, mud plug.



116. N. 1622. Plan, 1:50.



117. N. 1622. Section A—B, 1:50.



118. N. 1622. Pottery, 1:50.



**N. 1630.** Rectangular pit cut in the alluvial strata, see Pl. 38<sup>a, b</sup> and d. Axis points 48° east of north (or 48° west of south?). There is a single rectangular chamber covered by a groined corbel vault springing from the third course. Facing of stretcher courses with an occasional header course. Make-weight of bricks and mud, — above mostly headers. Carefully plastered. The small sticks seen in Pl. 38<sup>b</sup> projecting from the wall, are the roots of a weed which have grown through the wall.

There is a doorway on the valley side (local west) approached by a sloping passage cut in the *gebel*. The doorway is protected by a corbel vault which, of course, cuts the main corbel in a curved line which lies in the surface of both corbels. In other words the inner corners of the doorway curve both towards each other and towards the east end of the chamber. The doorway is blocked with brickwork.

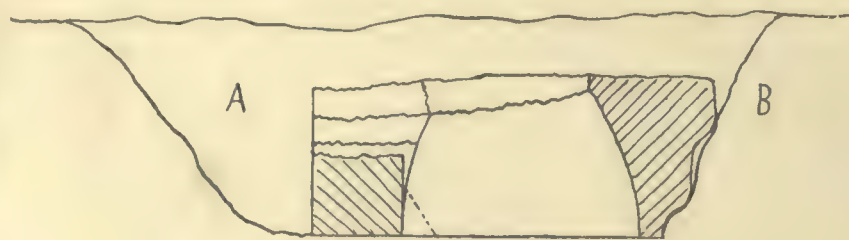
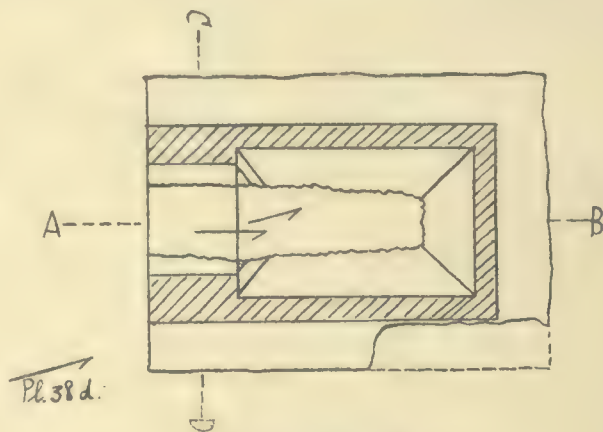
On the floor were found:

- 1—3. Jars of red ware, type v.
4. Jar of smooth red painted brown ware, type ix 4.
5. Pan of red ware, red painted, line polishes, type xx.

And also a few scattered human bones. Plundered by *sebbahin*.

**N. 1523.** Two tombs lying close together were numbered 1523. Their chronological relation was not discoverable as both had been broken at the point of contact. The southern tomb is a rectangular well which gave some evidence of having been roofed with stone slabs like the third dynasty graves in cemetery 500 which lies immediately to the south. In that case, the southern tomb which was completely plundered would be of the third dynasty and later than the northern tomb.

The northern tomb was a badly preserved corbel vault (see Pl. 39<sup>c</sup>, picture reversed in reproduction). If there was an entrance it must have been over the large boulder lying under the south-eastern side where the wall is broken through. On account of the doubt, the northern tomb may belong

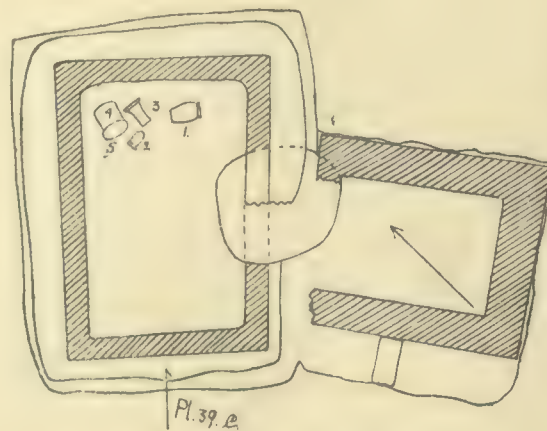


lines of doorway and of NW corner are coincident.

120. N. 1630. Section A—B, 1:50.



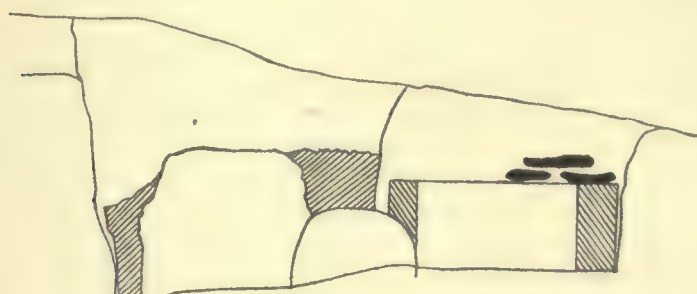
121. N. 1630. Section C—D, 1:50.



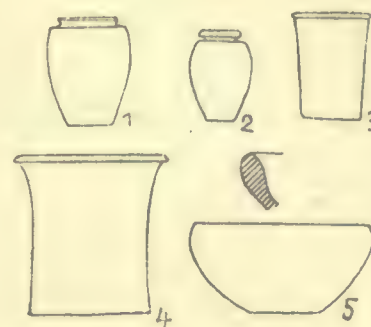
122. N. 1523. Plan, 1:50.



to the closed corbel type. The stone vessels found in it resemble the types of cem. 500 none of which however were found in closed corbels.



123. N. 1523. Long section, 1:50.



124. N. 1523. Stone vessels, 1:10.

The northern tomb had also been plundered and no bones were found. But five stone vessels lay in disorder in the northern corner (Pl. 50<sup>e</sup>). Nos. 1—4 are of alabaster, more or less waterworn. No. 5 is of red and white brecchia.

## 7. Tombs consisting of a single chamber,—a closed corbel vault, type B. 2. a.

There are only two tombs in this cemetery which consist of a closed corbel vault (see however N. 1523 above). Both of these (N. 1640 and N. 1623) lie on the outskirts of the cemetery; and probably do not belong to the period of the cemetery itself.<sup>1</sup>

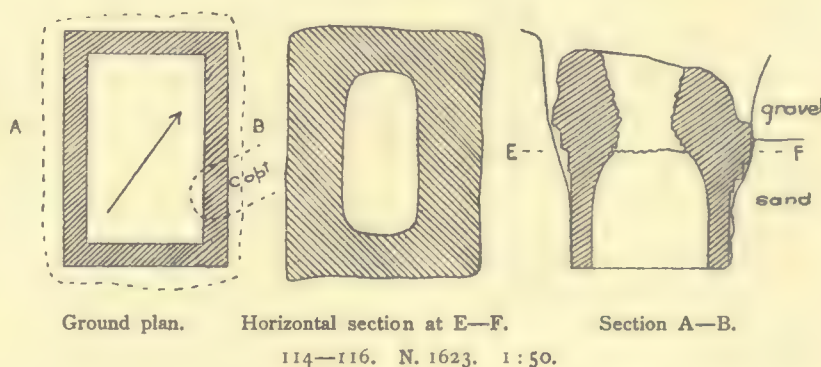
**N. 1623.** This tomb consists of a rectangular hole containing a closed corbel. The axis points 35° west of north.

The first eight courses (ca. 56 cm) of brickwork form a rectangular well the walls of which are  $\frac{1}{2}$  brick thick, all stretchers. Above this, the walls thicken to form the corbel and its make-weight.

The corners of the corbel are rounded by laying headers radiating around the corners and plastering. There was no entrance.

The tomb was completely plundered. A fragment of pottery and another of slate were found in the dirt. The east wall was cut by a Coptic burial.

**N. 1640.** This tomb consists of a rectangular hole containing a closed corbel. The axis points ca. 40° west of north.

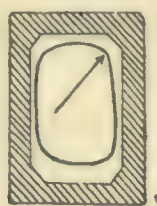


114—116. N. 1623. 1:50.

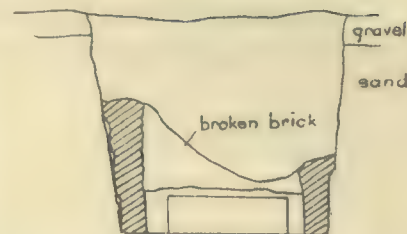
<sup>1</sup> Isolated tombs of a different period is a very common phenomenon in the cemeteries of Naga-ed-Dér. Cem. 3500 presenting mainly stone-roofed tombs of the third dynasty contained five corbels with entrance of the second dynasty and one predynastic grave. Cem. 500 presenting stairway and shaft mastabas of the third and fourth dynasties contained one grave of the intermediate period between the sixth and the twelfth dynasties. Cem. 3000 also contained three tombs of the old empire, one of the middle empire and one of the Coptic period.



The brickwork is poorly preserved. The corners seem to be cut off by stretchers across them. The vault contains a red pottery coffin with rounded corners such as are common in the graves in the third dynasty cemeteries (cem. 3500 and cem. 500—700). But the tomb was otherwise completely plundered.



128. N. 1640. Plan, 1:50.

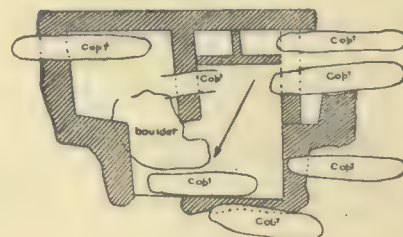


129. N. 1640. Long section, 1:50.

## 8. Addenda.

**N. 1639.** On the southern extremity of the cemetery in the eroded strip was a complex of walls numbered 1639. The southern wall ran about  $28^\circ$  north of west (or south of east).

The walls are so cut to pieces by Coptic burials that the exact form of the tomb to which the heavy outside walls belonged, is indeterminable. But the tops of the walls were plastered and at some points traces of wood were found. So we have at any rate a wood-roofed tomb. By the insertion of small crosswalls, the western part has been given the form of a chamber with two additional end chambers.



130. N. 1639. Plan, 1:50.

On the west side, a few bones were found accompanied by fragments of a flat alabaster pan (type S. XVIII, 12).

**N. 1585.** On the south of N. 1514, above N. 1645, an oval pottery coffin was found in an irregular hole ca. 60 cm deep. The axis of the box ran about  $45^\circ$  east of south. The box was partially covered by a limestone slab like N. 662, 743 etc. (3<sup>rd</sup> dynasty). Therefore this burial, as well as 1623 and 1640, is probably a later tomb intruded into the cemetery.

The skeleton which had been disturbed, as was to be expected from the removal of part of the limestone covering, was contracted on the left side head south. The head alone was missing. The bones were those of an adult female (?).

## VI. THE EXCAVATION OF CEMETERY N. 3000.

AFTER the excavation of cem. 1500, work was begun on land tips 1 and 2 (see Frontispiece and Pl. 1). The similarity of their position to that of 1500 gave hopes of finding further early dynastic cemeteries.<sup>1</sup> Land tip 2 was found to contain mud brick mastabas of a later date (4<sup>th</sup> dyn.); and its complete excavation was postponed until the following year. Land tip 2 was found to be the site of an early cemetery containing stairway corbel vaults and corbel vaults with entrances. The surface of the greater part of the site was piled high with debris from modern limekilns, and that of the southern part was much cut up by the kilns them-

<sup>1</sup> Cf. the site of the 2—3 dyn. cemetery 3500 and the site of cem. 10000.



selves (Pl. 57<sup>b, c</sup>; 61<sup>b</sup>). Trenching this debris revealed a disturbed desert surface over the greater part of the site; but in the northeastern corner, some ancient surface was found with superstructure walls (3017, Pl. 57<sup>d</sup>). At various points, the trenches came on soft spots either in the ancient surface or in the hard stratum which lay under the disturbed surface. The excavation of these spots led to the uncovering of some intact corbel vaults and other substructures. This took place in April—May 1901 under the supervision of Mr. F. W. GREEN and myself. The intact vaults were left to be worked out later; and Mr. GREEN in my absence at Dêr-el-Ballâs made notes on such tombs as were found open, clearing however only a few of the more exposed tombs. In the following winter, the whole of the limekiln debris was stripped from the ancient surface or from the first intact *gebel* surface where the old surface had been destroyed (Pl. 57<sup>e</sup>). The rest of the graves were then cleared and measured by myself with some assistance from Mr. MACE. The last of the intact tombs was not finished until January 1904.

## VII. CEMETERY N. 3000.

THE first land-tip south of the second ravine, the site of cemetery 3000, is, like the other land-tips, composed of a stratum of loose gravel about 70 cm thick resting on strata of hard fine gravel and dark soil. The limestone basis lies below these strata at a depth varying from 2—3 meters, see Map III.

The early cemetery contains only medium-sized and small tombs. One of the larger tombs is a wood-roofed tomb with end chambers (3016) (type A 1 b); two are wood-roofed tombs with stairway (3062, 3071) (type A 2 b, but 3071 exceptional); and three are large corbels with stairway (3013, 3017, 3031) (type B 2 b). Of the small tombs, three were *apparently* wood-roofed (3011, 3052, 3054) (type A 1 a); six were small corbels with entrance (3012, 3014, 3022, 3015, 3053, 3063) (type B 2 a); eleven are quite indeterminate (3001, 3024, 3051, 3002, 3055, 3023, 3021, 3072, 3093, 3094, 3003); four are in mud or pottery boxes without any substructure (3018, 3061, 3091, 3026); and four are simply holes in the ground (3019, 3092, 3033, 3025). N. 3150 was a deposit of stone vessels removed from some tomb by plunderers. N. 3017 had a well preserved superstructure; and 3093 appeared to show remains of a superstructure.

Thus while all the types of tombs found in cem. 1500 are represented, the greater number are of the corbel-vault types, but, in general, of smaller and poorer construction than those in cem. 1500. In the same way, the pottery, the stone vessels and the other objects found (see chapters on pottery and stone vessels, p. 89 ff.) correspond with the contents of the northern part of cemetery 1500 rather than the earlier southern part. Taken altogether these tombs are not so large nor so rich as those of the northern part of cem. 1500. The use of stone moreover in strengthening the corbels and the use of the corbel roof for the doorway in 3012, 3014, 3022, etc., may be further indications of the slightly later date. It is therefore probable that *cem. 3000 (with the possible exception of 3016 and 3062) was nearly contemporaneous with the later tombs of cem. 1500 (i. e. 1513, 1572, 1605, 1626) but extended downwards to a*



later limit than 1500. Thus N. 3000 may be ascribed with considerable certainty to the second dynasty. Those tombs which are contemporaneous with tombs of 1500, would belong to a less wealthy family or set of families than those of 1500.

*Chronological  
order of  
the tombs  
in N. 3000*

Taking into consideration the positions of the tombs and their types, N. 3016 is perhaps the earliest tomb in the cemetery while 3062 is also earlier at any rate than 3031. The main corbels 3017, 3013 and 3031, with wood-roofed doorways, seem to be nearly contemporaneous while 3022 and 3014, with corbel-roofed doorways, seem to be slightly later. But the pottery and stone vessels found all belong to one period — that of the corbel vaults of cem. 1500 — and differ characteristically from the pottery and stone vessels found in the later stone-roofed tombs of cem. 3500 and cem. 500. Therefore the chronological order of the different tombs appears to be a matter of indifference; but nevertheless the following list which gives the opinion formed on the spot, may not be entirely without value:

- |          |  |                            |
|----------|--|----------------------------|
| (1) 3016 | (2) 3017, 3013, 3015, 3063, 3031, 3071 | (3) 3012, 3022, 3014, 3053 |
| 3062     | 3021, 3001                             |                            |

The tombs on the southern slope are not contemporaneous with each other but distributed over the whole period of the cemetery.

*Plundering*

Of these tombs, the substructures of 3012, 3014, and 3022 were found intact. The burials in 3015, 3023, 3016, 3017, 3061, 3002, 3091, 3092 were nearly undisturbed. The interiors of 3053, 3013, 3017, 3011, 3031, 3001 had certainly been entered anciently by plunderers hunting treasure. One of the traces left by them was the deposit of stone vessels, N. 3150. The contents of 3003, 3051, 3052, 3054, 3055 were crushed by the weight of debris. And 3021, 3024, 3062, 3072, 3093 had been cleared out in the style of modern plunderers.

*Denudation*

The edge of the land-tip on the south and west had also suffered apparently from denudation by the river. The surface about the entrance to 3062, and about the tombs between 3072 and 3001 was worn away almost to the substructures, previous to the building of the kilns (cf. cem. 1500, p. 3).

*Fourth  
dynasty  
shafts*

In the fourth dynasty, three shaft tombs, whose superstructures have been destroyed, were made on the northern edge of the mound. These are square shafts with chambers on the south or west like the tombs on land-tip 2 immediately to the south (also cem. 700, Gizeh Wady etc.). They had all been completely plundered, and nothing but fragments of mud pots, see type XXIX, 3—5 were found.

*Old  
Kingdom  
Grave*

In the northern corner, partly cut away by modern quarries was a rectangular shaft with rectangular side-corner chamber (see MACE, *Early Dynastic Cemeteries II*) such as occur in the 5<sup>th</sup> and 6<sup>th</sup> dynasties. This was completely plundered.

*Middle  
Kingdom  
Grave*

Running down from the valley side between the 4<sup>th</sup> dynasty shafts (see Map III) was a long narrow sloping passage. This led after a turn to the south and again to the west to a chamber in the floor of which was a shallow burial pit (filled with water). In this burial pit was found an uninscribed carnelian scarab and a few beads such as are usually ascribed to the twelfth dynasty. About the entrance to the corridor, a number of red baked clay cones (not inscribed) were found in the surface debris.



The lower part of this corridor had been enlarged, *in the Coptic period*, to make a communal burial place, and a stairway had been built in the old twelfth dynasty passage to give access to this chamber (see Pl. 69<sup>d</sup>). This Coptic tomb belongs undoubtedly to cemetery 2000 situated on the opposite bank of the ravine (2) and may, therefore, be dated with that to about the 6<sup>th</sup> century A. D. The burials in the chamber of this tomb had suffered so from moisture and from the destruction of its roof and north wall by modern quarries that the floor was found covered with a heavy mass of mud, organic dirt, and bone powder in which were found various Coptic beads and ornaments (like those of cem. 2000). The cemetery 3000 contained no other Coptic burials.

In modern times (in the last 20 years according to Sheikh Nasr, who controls the stone quarries in the district) eight or ten limekilns were built on this land-tip. The limestone for these kilns was broken wherever the stone was easily accessible in the immediate neighborhood. In land tip 2, the limestone appears to have been near the surface; and the whole outer end of the tip has been broken away nearly to the level of the cultivation (see Pl. 2, immediately to the right of the figure 2). On the eastern edge of 3000 the limestone rises suddenly to within 50 cm of the surface; and to the east of this, a great hole ca. 50 meters across and 2—5 meters deep has been broken, apparently by working in from the southern bank of the second ravine, see Map III. The quarrymen also worked along the ravine towards the cultivation; and, in so doing, they broke away the side of the sixth dynasty tomb, the roof and northern side of the Coptic communal grave, the upper part of two of the fourth dynasty shafts and the northern side of the twelfth dynasty sloping passage. The kilns were upright cylindrical structures of mud brick (see Pl. 59<sup>b</sup>) sunk to a depth of 1—1½ meters below the old surface. Some of the bricks may have been taken from the ancient substructures; but others are clearly modern, judging by the shape and hardness. These kilns were apparently built and rebuilt several times moving from the southwest corner northwards to avoid the accumulating debris; and the great damage was done by the holes dug for this purpose.<sup>1</sup> The lime burners do not seem to have paid much attention to the tombs (cf. 3016); but it is possible that 3062, 3021, 3093 and the graves on the northern edge may have been cleaned out by them. The ashes, the small limestone chips and the slag from the kilns were dumped out over the surrounding surface, see Pl. 57<sup>b</sup>. And so we found the site when we first attacked it.

## VIII. DESCRIPTION OF TOMBS IN CEM. 3000.

### 1. Single chamber, wood-roofed tombs, type A. 1. a.

N. 3052. **R**ECTANGULAR pit, lined below with brickwork. Axis points 32° east of south. The end walls are built of header courses; the side walls, of stretchers. So the side walls are, including plaster on inside, about 20 cm thick; and the end walls about 35 cm.

<sup>1</sup> The same thing was found to a lesser extent on the southern edge of cem. 500.



The roof was probably of wood<sup>1</sup>, but no traces were preserved. The surface was in this part of the cemetery badly disturbed by limekilns.

The remains of the skeleton showed distinctly a contracted burial on left side, head south.

About the burial but mainly in the north end of the grave were the following objects (noted by GREEN):

1. 2. 3. 5. Jars of red painted rough red or brown ware, type v. See Pl. 75<sup>b</sup>.
4. 6. Dish of red painted, pebble polished brown ware type xxvi, Pl. 75<sup>b</sup>, Diam. 24 cm.
7. Alabaster bowl, hole broken in bottom and cracked, Pl. 72<sup>d</sup>. Diam. 18 : h. 10 cm.
8. Alabaster bowl, Pl. 72<sup>d</sup>. Diam. 8 : h. 8 cm.
9. Alabaster cylindrical jar, with rope cord on neck, Pl. 72<sup>d</sup>.
10. Fragment of 9.
11. Slate dish, Pl. 72<sup>d</sup>.

**N. 3054.** Rectangular hole, lined below with brickwork to a height of 70 cm. Axis 40° east of south.

The walls were  $\frac{1}{2}$  brick thick all stretchers except the top course which was a header course (ca. 25 cm) and were plastered inside. The roof was probably of wood.

The skeleton was tightly contracted, on left side, head south.

At the end near the head were (noted by GREEN):

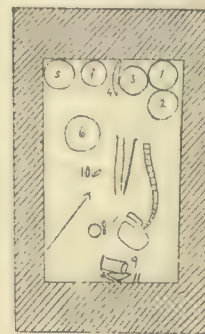
1. Jar of red painted rough red ware, type v. H. ca. 35 cm.
2. Alabaster jar, Pl. 72<sup>b</sup>. Diam. 10 : h. 15 cm.

**N. 3011.** Rectangular brick lined grave. Axis 48° east of south.

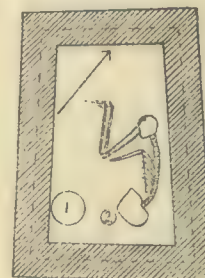
The walls were  $\frac{1}{2}$  brick thick below increasing to  $1\frac{1}{2}$  bricks at the top and were ca. 70 cm high. The roof was probably of wood. A few scattered broken bones were found. The row of pots along the west (valley) side and at the north end appear undisturbed (cf. 3016, 3022, 3023, 3012). As it is *probable* that these were in front of and at the feet of the burial, it is *probable* that the burial was contracted on the left side head south.

The objects found were (noted by GREEN):

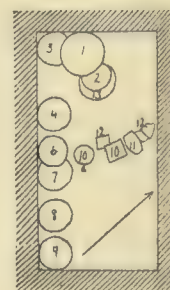
1. Pot of red painted brown ware, pebble polished, type xxv. Contained frag. of human bones.
2. Bowl of red painted brown ware, not polished, type xxv.
3. 4. 8. 9. Jar of red painted rough ware, type v.
5. Omitted.



131. N. 3053, 1 : 50.



132. N. 3054, 1 : 50.



134. N. 3011, 1 : 50.

<sup>1</sup> In general, wood-roofed tombs which have lost their roofs, are characterized by straight vertical walls or straight walls with a slight outward batter, containing a large proportion of stretcher courses and plastered on top of walls. The chamber is square cornered and filled with sandy or ordinary surface debris. Corbel vaults are marked by concave inner surface or crushed walls. The brickwork is composed almost entirely of headers (especially in the smaller tombs). The chambers are often round cornered and filled with thick debris containing a large proportion of Nile mud (decayed mud-brick of roof).



6. 7. Flat plates, red polished brown ware, type xxvi. Decayed.
8. 9. See 3.
10. Alabaster cylindrical jar, with fine cord around neck, Pl. 72<sup>b</sup>. Broken: 10<sup>a</sup> was mouth down. Under these fragments were toe (or finger?) bones.
11. Rough calcareous alabaster jar (like Pl. 72<sup>f</sup> 3261) (type S III). Diam. 8 : h. 14 cm.
12. Marble bowl with red and blue veins, Pl. 72<sup>b</sup>.
13. Limestone bowl in fragments (type S xxvi). Diam. 23 : h. 7 cm.

## 2. Wood-roofed tombs with additional chambers, type A. 1. b.

**N. 3016.** Rectangular hole, containing mud brick substructure, with one main chamber and two small end chambers on south end. Axis 51° east of south.

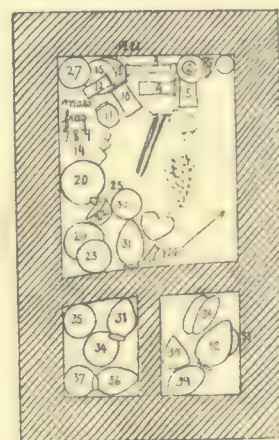
The outside wall was one brick thick; the cross walls which were somewhat irregular were  $\frac{1}{2}$  brick thick. The bricks were apparently of different sizes: in the thin cross wall between the two end chambers, the bricks appeared to be  $23 \times 11\frac{1}{2} \times 5$  cm, but in the other walls they appeared to be, as usual, about  $30 \times 15 \times 7\frac{1}{2}$ . All walls were plastered inside: the floor was also plastered.

A limekiln had been built over the east side of the main chamber descending to within 20 cm of the pottery. Another limekiln touched the west wall of the main chamber, see Map III. But neither appears to have led to any modern plundering.

The skeleton was contracted on the left side, head south; but was too rotten to be cleared. No trace of mat, cloth or box was preserved.

The end chambers and the main chamber in front of and at the feet of the skeleton, were crowded with pottery and stone vessels. The disturbance is such as may have been caused by the fall of the roof. The contents were noted by GREEN.

1. Alabaster cylindrical jar, Pl. 70<sup>a</sup>. Diam. mouth 13 cm : h. 24 cm.
2. A group of broken alabaster jars, including
  - a. Alabaster cylindrical jar, Pl. 70<sup>a</sup>. Diam. 19 : h. 36.
  - b. Alabaster cylindrical jar, Pl. 70<sup>a</sup>. Diam. 8 : h. 20.
  - c. Alabaster bulging jar, Pl. 70<sup>a</sup>, top row. Greatest diam.  $13\frac{1}{2}$  : h.  $14\frac{1}{2}$  cm.
3. Tall alabaster cylindrical jar, with cord in relief on neck, Pl. 70<sup>a</sup>. Broken vertically in two pieces, lying one inside the other.
4. Alabaster cylindrical jar with cord on neck, Pl. 70<sup>a</sup>.
5. Alabaster cylindrical jar, Pl. 70<sup>a</sup>.
- 6.—9. A mass of broken alabaster on the top of which were 6<sup>a</sup> (Pl. 70<sup>a</sup>) and 7.
- The rest were joined up into the four alabaster pieces numbered 6 on Pl. 70<sup>a</sup>.
- 6a. Limestone, thick plate, broken. Base appears to have been mended by some cement which has turned black. Pl. 70<sup>a</sup>.
7. Slate bowl, broken, Pl. 70<sup>a</sup>.



135. N. 3016, 1:50.



8. 9. See 6.
10. Alabaster cylindrical jar, Pl. 70<sup>a</sup>.
11. Alabaster bulging jar, Pl. 70<sup>a</sup>.
12. Alabaster cylindrical jar, Pl. 70<sup>a</sup>.
13. Fragments of 10—11.
14. Limestone cup with spout, Pl. 70<sup>a</sup>. Diam. 8 cm : h. 5,2 cm.
15. Slate bowl in fragments, Pl. 70<sup>a</sup>.
16. Rough slate fragment, showing signs of having been rubbed, see no. 25. No sign of green paint but slate was incrustated with mud so that the paint may have been washed off after the slate was put in the grave.
17. Fragments of other adjacent numbers.
18. Alabaster dish, broken, Pl. 70<sup>a</sup>. Under it were fragments of charcoal and nos. 19, 21.
19. Copper chisel, about 13 cm long, section in middle 5 mm  $\times$  6 mm. One end tapers to a cutting edge about 6 mm long; the other tapers only slightly to square end, ca. 5 mm  $\times$  5 mm.
20. Slate plate with low ring stand on bottom, broken, Pl. 70<sup>a</sup> (photographed upside down to show ring). Diam. 30 cm.
21. Copper chisel, about 12 cm long, section in middle 8 mm  $\times$  8 mm. One end is flattened to a cutting edge; the other tapers slightly to a square end.
22. Bowl, red painted brown ware, *pebble polished all over*, type xxiv<sup>b</sup>, Pl. 73<sup>b</sup> no. 13.
23. Bowl, of red painted, pebble polished, brown ware, type xxiv<sup>b</sup>.
24. Flat plate of red painted, brown ware, pebble polished on face, type xxvi, Pl. 73<sup>b</sup> no. 4.
25. Rough square rubbing stone, see no. 16.
26. Bowl, of red painted, pebble polished brown ware, type xxiv<sup>b</sup>, Pl. 73<sup>b</sup> no. 12.
27. Small jar of rough red ware, type v<sup>a</sup> flat base, Pl. 73<sup>b</sup> no. 1.
28. 29. These numbers were reserved for pieces lying underneath in the main chamber and were never used.
30. Flat plate of red painted brown ware, pebble polished on face, type xxvi. Contained small bones (kid?): other bones were scattered under 31.
31. Jar of red painted rough red ware, type v<sup>b</sup>, Pl. 73<sup>b</sup> no. 3. H. 34. See 30.
32. Large jar of smooth red painted brown ware, type iii<sup>b</sup>. Diam. 25 : h. 45 cm.
33. Deep plate of red painted brown ware, dull polish, type xxvi, Pl. 73<sup>b</sup> no. 2. Covered with black specks (due to weathering). Diam. 30 cm : h. 10 cm. Was under 32 and contained some bones of small offering animal (kid?).
34. Like 31, type v<sup>c</sup>.
35. Pot of red painted brown ware, dull polish, type xxi<sup>b</sup>, Pl. 73<sup>b</sup> no. 6. Black specks like 33. Diam. ca. 25, h. 30 cm. Contained fragments of bones and bones of leg and spinal column of kid(?).
- 36.—38. Like 31, type v<sup>c</sup>. For 38 see Pl. 73<sup>b</sup> no. 7.
39. Four flat plates, type xxvi.

## 3. Wood-roofed tombs with stair, type A. 2. b.

**N. 3062.** A rectangular hole cut in alluvial strata down to solid limestone, and lined with brickwork. See Pl. 66 and fig. 141. Axis  $58^{\circ}$  east of south.

The lower part of the walls is  $\frac{1}{2}$  brick thick to a height of about 45 cm (i. e. ca. 6 courses). Above they are 1 brick thick with about 1 header course to three stretcher courses. The corners are very imperfectly and irregularly bonded. The southern wall has bulged in owing to the weight of gravel behind it. There were no traces of end chambers but the condition of the walls did not permit a definite conclusion.

The roof was probably of wood.

The main chamber was entered by a stairway built of bricks on *gebel* but mostly destroyed before found by us.

The tomb was completely plundered. Even the mud floor was broken into. In the dirt one complete pottery cone was found and several broken ones such as were found near the 12<sup>th</sup> dyn. tomb on the northern edge and in many other 12<sup>th</sup> dynasty tombs at Sheikh Farag and in cemeteries 3500 and 100.

**N. 3071.** This tomb is quite irregular in construction owing to the fact that it is built partly in the stairway of 3031 and appears to be subsidiary to that tomb. The axis is  $43^{\circ}$  east of south (while that of 3031 is  $68^{\circ}$  and 3062 is  $58^{\circ}$  east of south). See Pl. 67<sup>b, c</sup> and fig. 141.

The walls of 3071 are bonded with the stairway of 3031. The walls are  $\frac{1}{2}$  brick thick but surmounted by one course of headers (i. e. 1 brick thick). The incline of the stair leading to 3031 was filled with rubbish and plastered level with the floor of the north end of 3071 (see fig. 142).

The doorway was blocked with brickwork like that of 3031. It was roofed with branches of wood which were found in position, see Pl. 67<sup>d</sup>.

It is probable judging from the logs over the door and the straightness of the walls that the roof of the chamber was also of wood.

The skeleton was contracted on the left side head south, without trace of cloth, mat or wood, see Pl. 67<sup>e</sup>.

In front of the burial were the following objects (fig. 137):

1. 2. 3, Jars of rough red ware, type v<sup>c</sup>.
4. Alabaster dish, shallow, broken, Pl. 72<sup>f</sup>.
5. Alabaster cylindrical jar.
6. Alabaster cylindrical jar, broken, upper part in Pl. 72<sup>f</sup>.
7. Limestone bowl, broken, Pl. 72<sup>f</sup>.
8. Flat pan, red polished brown ware, type xxvi.
9. Pot of smooth red painted red ware, type xxi<sup>a</sup>. Diam. 25 : h. 12 $\frac{1}{2}$  cm.

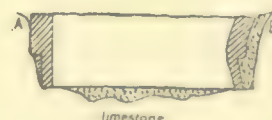


Fig. 141, section A—B, 1 : 100.



136. Fig. 141, section C—D, 1 : 100.



137. N. 3071. Plan, 1 : 50.



## 4. Corbel vaults with stairway, type B. 2. b.

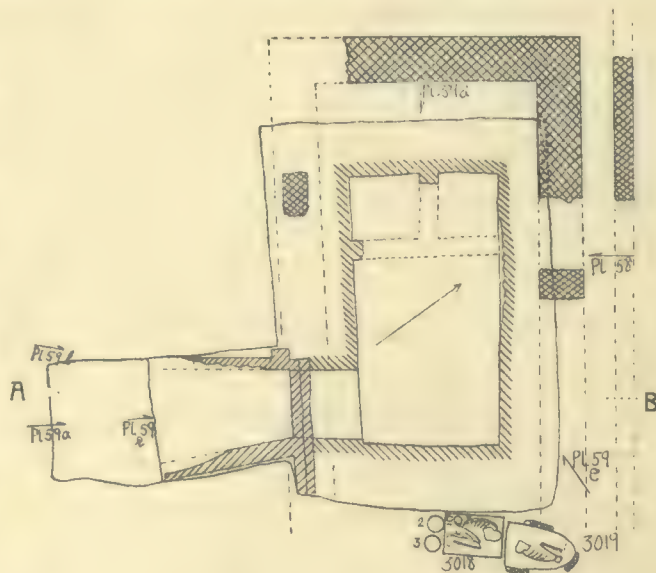
**N. 3017.** Rectangular hole cut in the gravel to the solid limestone, containing a corbel vault with three chambers and a stairway. Axis  $56^\circ$  east of south. See Pl. 58, 59, 69<sup>a, b</sup> and fig. 138 and 139.

The walls of the corbel were apparently 1 brick thick below and thickened to a heavy make-weight at about 1 m up. This was further weighted by a packing of limestone chips, laid in, *pari passu* with the courses of the vault. And the whole space between the vault and the surface was filled with such limestone chips (see Pl. 59). The lower part of the vault was rectangular. In the SE corner, a slab of limestone was laid across to support the corbel above (see Pl. 59<sup>d</sup>) which was rounded (not groined).

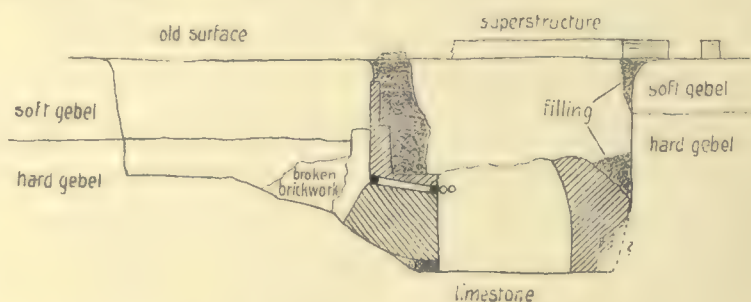
The cross-walls must have been  $\frac{1}{2}$  brick thick, but only traces of them were found.

The doorway was roofed with branches of wood (or saplings), and blocked with brick work.


A slab of limestone formed the inside of the threshold next to the chamber. The approach was a slanting incline plastered with mud and lined on the sides with  $\frac{1}{2}$  brick walls. The incline was occupied by a limekiln (Pl. 59<sup>d</sup>) and had been damaged in the building of the kiln.



138. N. 3017. Plan, 1 : 100.



139. N. 3017. Section A—B, 1 : 100.

At the northeast corner, the retaining wall of the superstructure was preserved (Pl. 57<sup>d</sup> and fig. 138 marked ) There was another bit of it preserved on the front. The north end and the desert side did *not have* niches: the bit on the valley side was not sufficient to give any evidence. This retaining wall was built on the filling on both sides. Behind the north end of the desert side at an interval of 45 cm was an inclosing wall. The outside of the retaining wall, the floor of the space between that and the enclosing wall and both sides of the enclosing wall were plastered with mud.

On the floor of the main chamber were found some scattered fragments of bones. The most of the pottery and stone vessels were in the northwest corner, see Pl. 56. If the tomb had been disturbed by plunderers the disturbance was ancient; for the debris over the vault was compact and undisturbed. The vault had collapsed, crushing the cross-walls and of course, breaking and scattering the contents of the chambers.

The objects found on the floor of the tomb (see Pl. 69<sup>a, b</sup>) were:

- 1—19. Jars of red painted rough brown or red ware, type v<sup>b</sup> mostly with flat tip at base, Pl. 74<sup>b</sup>.

20. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Diam. 16 : h. 25 cm.
21. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Diam. 23 : h. 32½ cm.
22. Bowl of red and white breccia, Pl. 71<sup>b</sup>. Diam. 25 : h. 14 cm.
23. Alabaster bowl, Pl. 71<sup>a</sup>. Diam. 32 cm.
24. Alabaster pan, Pl. 71<sup>a</sup>. Diam. 34 cm.
25. Alabaster plate, Pl. 71<sup>a</sup>. Diam. 26 cm.
26. Limestone bowl, Pl. 71<sup>a</sup>. Diam. 27 : h. 12 cm.
27. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Diam. 16 : h. 22½ cm.
28. 58. Alabaster bowl, Pl. 71<sup>a</sup>. Diam. 20 : h. 12 cm.
29. Alabaster cylindrical jar, badly corroded by water, without cord. Diam. mouth 15 : h. 18 cm.
30. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Diam. 14 : h. 32 cm.
31. Slate plate, Pl. 71<sup>b</sup>. Diam. 32 : h. 3 cm.
32. Alabaster bowl, Pl. 71<sup>a</sup>. Diam. 24 : h. 14 cm.
33. Limestone bowl, Pl. 71<sup>a</sup>. Diam. 29 : h. 15 cm.
34. Volcanic ash bowl, rim chipped, Pl. 71<sup>b</sup>. Diam. 13 : h. 4 cm.
35. Alabaster cup-bowl, Pl. 71<sup>a</sup>. Diam. 18 : h. 13 cm.
36. Fragments of 33.
37. Limestone bowl, Pl. 71<sup>a</sup>. Diam. 18.
38. Alabaster bulging jar, Pl. 71<sup>b</sup>. Diam. top 6½, bottom 7 : h. 10 cm.
39. Rectangular pebble, with reddish stain, Pl. 71<sup>b</sup>. Length 5 cm.
40. Calcareous alabaster cup with recurved rim, Pl. 71<sup>b</sup>. Diam. top 4½ : h. 8,2 cm.
41. a. Yellow limestone cup with spout, decayed, Pl. 71<sup>b</sup>. Diam. 10½ : h. 4 : L. of spout 1½.
- b. Alabaster saucer, Pl. 71<sup>b</sup>. Diam. 10½. Was under a.
- c. Green glazed bead, barrel shaped. Was under a and b.
42. Fragments of 35.
43. Fragments of 33. These were found above the main mass and laid in the corner near 18 by the workmen.
44. Limestone bowl with rim in fragments. Diam. ca. 23.
45. Bowl of red painted red ware, pebble polish, type xxiv<sup>b</sup>, Pl. 74<sup>b</sup>. Diam. 18 : h. 7 cm.
46. Plate of red pol. brown ware, type xxvi, Pl. 74<sup>b</sup>. Diam. 28 : h. 4 cm.
47. Alabaster bowl, Pl. 71<sup>a</sup>. Diam. ca. 27 : h. ca. 11 cm.
48. Plate of red pol. ware, type xxvi. Diam. 20 : h. 6 cm.
49. Limestone dish, Pl. 71<sup>a</sup>. Diam. 28 : h. 6 cm.
50. Pot of smooth red painted red ware, broken, type xxi<sup>b</sup>, Pl. 74<sup>b</sup>. Contained fragments of offering bones.
51. Like 48, type xxvi.
52. Like 45, type xxiv<sup>b</sup>.
53. Like 1—19, type v<sup>c</sup>.
54. Volcanic ash bowl, Pl. 71<sup>b</sup>. Diam. 24 : h. 14 cm. Underneath were a few coals.



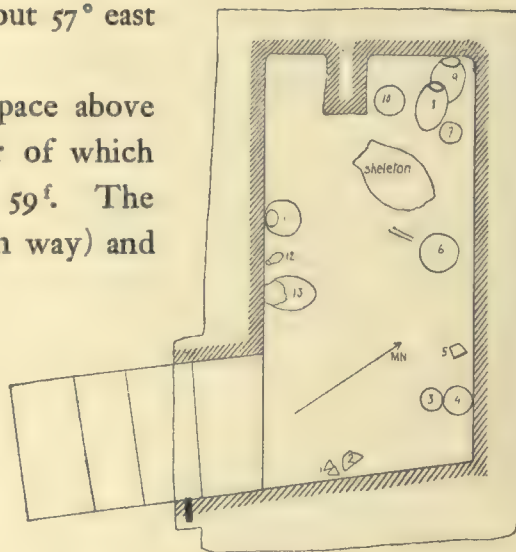
55. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Diam. 18 : h. 32 cm.
56. Alabaster cylindrical jar, Pl. 71<sup>b</sup>. Underneath 55—56 were coals and a few finger bones.
57. Fragments of 55—56 with charcoal and fragments of bones.
58. Part of 28.
59. Fragments of vessels in the main mass.
60. Limestone bowl, Pl. 71<sup>b</sup>.
61. Alabaster bowl, Pl. 71<sup>b</sup>. Diam. 14 : h. 6 cm.
62. Alabaster bowl, Pl. 71<sup>a</sup>. Diam. 23 : h. 10 cm.
63. Alabaster plate, Pl. 71<sup>a</sup>. Diam. 31 cm.
64. Alabaster (rim) and pink limestone (body) bowl, very thin, Pl. 71<sup>a</sup>. Cut from a stone where an alabaster stratum overlay a pink limestone (or marble?) stratum.
65. Limestone dish, Pl. 71<sup>a</sup>. Diam. 28.

In the debris in the south end were found two small cups and a bulging jar of smoothed fine-grained red ware, Pl. 74<sup>b</sup> marked x.

**N. 3013.** Corbel with stair, similar to 3017, but smaller. Axis about 57° east of south. See Pl. 60<sup>a, b</sup>, 69<sup>c</sup> and fig. 140.

The brickwork was crushed to mud, Pl. 59<sup>f</sup>. The space above the vault was filled with limestone chips the lower layer of which had mixed to a certain extent with the brickwork, Pl. 59<sup>f</sup>. The northern end of the vault had been broken into (or given way) and the filling had come down into the chamber, see fragments of limestone clinging to brickwork on Pl. 60<sup>b</sup>. There appears to have been two chambers at the north end.

The doorway was on the valley side at the south end of the main chamber, roofed with branches, blocked with brickwork and approached by a rough stairway cut in the *gebel* and plastered with mud. The stairway was filled with limestone chips and mud.



140. N. 8013. Plan, 1 : 50.

Along the south end on the old surface was a fragment of a superstructure wall but it appeared to belong to the outer enclosure of 3017, see Map III.

The skeleton was on the left side head towards the SE but it had been disturbed (the head was gone) and may have been shifted from its original position. The condition of the skeleton and the position of the other contents indicate ancient plundering.

On the floor were the following objects (see Pl. 69<sup>c</sup> and 60<sup>a, b</sup>):

1. Two fragments of a volcanic ash bowl, broken and mended with cement in antiquity, Pl. 72<sup>b</sup>.
2. Volcanic ash bowl, Pl. 72<sup>b</sup>. Diam. 15½ : h. 9½ cm.
3. Bowl of red painted red ware, type xxiv, without polish. Diam. 15 : h. 7 cm.
4. Plate of red polished brown ware, type xxvi. Diam. 19½ : h. 6 cm.
5. Stand (?) of rough brown ware, type xx. Diam. 11 : h. 8 cm.

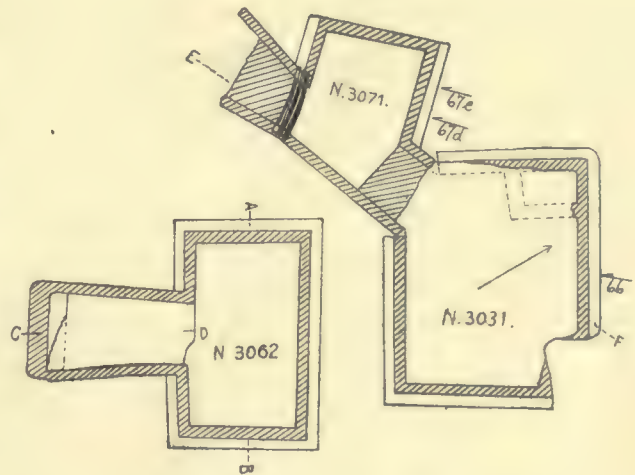
6. Like 4, type xxvi. Diam. 26 : h. 6 cm.
7. Alabaster bulging jar, Pl. 72<sup>b</sup>. Diam. top 7, middle 13, base 8 : h. 8 cm.
8. Jar of red painted rough brown ware, type v. H. 31 cm.
9. Like 8, type v. Contained dirt and finger bones.
10. Alabaster bowl, Pl. 72<sup>b</sup>. Diam. 20 : h. 8 cm.
11. Like 8, type v. Contained dirt and finger bones.
12. Bottle of dark stained rough brown ware, type xv, see Pl. 69<sup>c</sup>. H. 17½ cm.
13. Jar like 8, type v, broken.
14. Beads: carnelian,—1 long cylindrical, 2 short barrel-shaped, 1 shell-shaped; amethyst,—1 short barrel shaped; blue glaze,—1 long barrel-shaped, 4 small spherical, 1 disc; total 11 beads.
15. Black stone jar, small, with cord-net pattern in relief, Pl. 41<sup>c</sup> numbered 30.

**N. 3031.** In a rectangular hole sunk through the alluvial strata into the limestone, was a corbel vault with stairway. Axis 58° east of south. See Pl. 66, 67<sup>b, c</sup> and fig. 141—144.

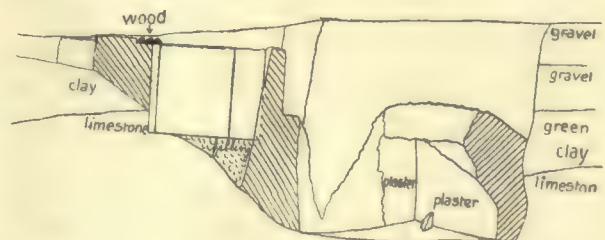
The brickwork was crushed as usual but at one spot on the west side the bricks could still be traced, see fig. 143. The first three courses were single stretchers (i. e. wall ½ brick thick): The next three were two headers and one double stretcher (i. e. wall 1 brick thick): at the top of the sixth course the corbel began, built entirely of headers. The space between the make-weight and the *gebel* was filled with limestone debris. At the SE corner was a nodule of hard limestone over which the wall was built.

There were traces of only one chamber in the NE corner; and here was only a fragment of the cross wall attached to the east wall of the corbel. But the space thus indicated was filled with stone vessels, see fig. 144.

The doorway was in the NW corner of the corbel, approached by a slanting incline (Pl. 66). The whole situation indicates that the entrance was built thus to avoid the older tomb 3062. The doorway was blocked with brickwork; and must have been roofed with wood but no trace of the wood was preserved. The incline was lined on the sides with ½-brick walls. The north well was diverted so as to form a rectangle (N. 3071) projecting to the north, with a floor of limestone about 1.20 m above the floor of 3031. The incline was filled with limestone debris and plaster to the level of this floor. The end of the stairway was roofed with wood to form



141. N. 3031, 3071, 3062. Plan, 1:100.



142. N. 3031. Section E—F, 1:100.



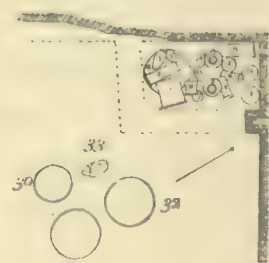
a new doorway and blocked with brick work. In the compartment thus formed was the contracted burial N. 3071 described above, p. 71.

In the chamber were the following objects, embedded in mud from the roof (noted by GREEN):

1. Alabaster cylindrical jar, thick walls, no cord, Pl. 70<sup>b</sup>. Diam. 18 : h. 18 cm.
2. Alabaster cylindrical jar, no cord, Pl. 70<sup>b</sup>. Diam. 9 : h. 22½ cm.
- 2a. Yellow limestone, the upper part of a small jar which was made in two parts, Pl. 70<sup>b</sup>. Pink cement adheres to the lower edge. The lower part may have been the *alabaster* cup no. 7. Diam. 7 cm.
3. Alabaster bulging jar, Pl. 70<sup>b</sup>. Diam. 7 : h. 12 cm.
4. Alabaster bowl, Pl. 70<sup>b</sup>. The bottom was a separate piece, a disc with beveled edge set in from below and cemented with pink cement. This disc had on the bottom side six small holes (pits) filled with small pieces of alabaster cemented in: on the other side were five wider (diam. ca. 3 mm) and shallower pits without fillings.
5. Slate plate, Pl. 70<sup>b</sup>, numbered 12<sup>a</sup> by mistake. Diam. ca. 15.
6. Beads; Pl. 73<sup>c</sup>. The small dark disc beads are bright red carnelian, found mostly under no. 2: the cylindrical beads are steatite (5 dull beads) and carnelian (1 polished bead) found scattered among the stone vessels: the bright barrel-shaped bead is carnelian, found near no. 15: the others are glazed beads, found scattered. The irregular bits in the middle are decayed copper beads(?) found scattered among the stone vessels. The large amulet was found in no. 13, see no. 13<sup>a</sup>.
7. Alabaster, lower part of a small jar, similar to that of which 2<sup>a</sup> was the upper part Pl. 70<sup>b</sup>. Diam. 7 : h. 7½ cm. The whole was similar to 3.
8. Volcanic ash cup, Pl. 70<sup>b</sup>. Diam. 12 : h. 9 cm.
9. Volcanic ash cylindrical jar, Pl. 70<sup>b</sup>.
10. Cylindrical jar of dull polished black ware, Pl. 70<sup>b</sup>. Diam. 8 : 9½ cm.
11. Alabaster bulging jar, Pl. 70<sup>b</sup>. Diam. 12 : h. 12 cm.
12. Alabaster bulging jar, decomposed by water, Pl. 70<sup>b</sup>. Diam. 12.
- 12a. Volcanic ash saucer, Pl. 70<sup>b</sup>, numbered 13 by mistake. Diam. 14 : h. 2½ cm. This was under 12.
13. Alabaster saucer, Pl. 70<sup>b</sup>, not 13 but just below 1. Diam. 10½ : h. 3 cm.
- 13a. Limestone amulet, Pl. 73<sup>c</sup>, on the right. The eyes are two bored out pits containing each a small limestone ring set in with cement. The rounded back is pierced by a hole (for the string) just behind the eyes. This was in no. 13.
14. Alabaster bulging jar, Pl. 70<sup>b</sup>. Diam. 12 : h. 9 cm.
15. Alabaster cylindrical jar, with cord, Pl. 70<sup>b</sup>. Diam. 10 : h. 27 cm.
16. Alabaster cylindrical jar, no cord, Pl. 70<sup>b</sup>, to the right of no. 3.



143. N. 3031.  
Section of corbel,  
1 : 50.



144. N. 3031.  
Position of objects 1 : 50.

17. Alabaster bulging jar, Pl. 70<sup>b</sup>; between no. 2 and no. 3.
18. Alabaster bowl, Pl. 70<sup>b</sup>, to the right of no. 15.
- 19—29. These numbers were left for pieces which might be under 1—18 and were never used.

On the floor of the main chamber were found:

30. Alabaster bowl, broken, Pl. 70<sup>b</sup>.
31. Alabaster bowl, broken, Pl. 70<sup>b</sup>.
32. Plate of red polished brown ware, type xxvi. Diam. 32 cm.
33. Bowl of red polished brown ware, type xxiv<sup>b</sup>.

### 5. Small corbel with entrance, type B. 2. a.

**N. 3012.** A small corbel with entrance on the south. Axis 43° east of south. *An intact tomb.* See Pl. 60<sup>c-e</sup> and fig. 145, 146.

This corbel is rather peculiar in having a small space inclosed by walls in front of the entrance. The two sides and the north end are corbelled. The make-weight on the north end was made of bricks and stones roughly laid in mud (Pl. 61<sup>b</sup>). The front (south) wall is a straight wall  $\frac{1}{2}$  brick thick. The walls inside are plastered: also the front and the inside of the walls in front of the entrance.

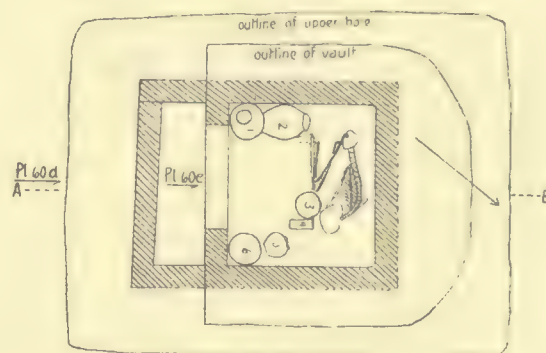
The doorway is roofed with a corbel (Pl. 60<sup>d</sup>). It was blocked with bricks when found; so the tomb was intact.

The skeleton was contracted on the left side head to the local east (Pl. 60<sup>e</sup>). The left knee, being underneath, was drawn up nearer the chin than the right knee. The body was probably wrapped in cloth of which traces were found.

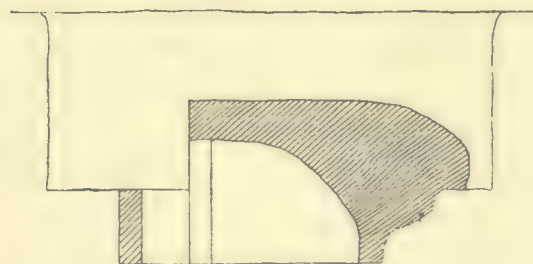
About the body, mainly in the front of the tomb (Pl. 60<sup>e</sup>), were the following objects:

1. 2. 6. Jar of red painted rough ware, type v. Contained scraps of dried mud.
3. Slate bowl, with a hole cut in the rim (as if a spout had been attached), Pl. 72<sup>b</sup>. Diam. 17 $\frac{1}{2}$ : h. 5 cm.
4. Alabaster cylindrical jar, no cord, Pl. 72<sup>b</sup>. H. 13 $\frac{1}{2}$  cm.
5. Bulging jar of red polished ware, type xiii<sup>a</sup>. Diam. 14: 12 cm.
6. See 1.

**N. 3022.** A small corbel with two small chambers on the north end and with an entrance on the south end. Axis 50° east of south. *Intact tomb.* See Pl. 57<sup>d</sup>, 61—63 and fig. 147, 148.



145. N. 3012. Plan, 1:50.



146. N. 3012. Section A-B, 1:50.



The crosswalls forming the end chambers are not bonded with the main wall. They are  $\frac{1}{2}$  brick thick. The corbel does not rest in any way on these crosswalls.

The main chamber is built in a hole cut to limestone in the alluvial strata. The walls on the north end and the two sides are corbelled. But the south end was left open to form the doorway and covered by a corbel, — the continuation of the corbelled roof of the main chamber.

The walls begin below with one course of stretchers,  $\frac{1}{2}$  brick thick (brick ca.  $24 \times 12 \times 6$  cm); then come 5 courses of alternate headers and stretchers 1 brick wide: and above that the wall thickens to form the makeweight of the corbel. The west side of the corbel is built of headers; the east side, *having a less degree of curvature*, is built of alternate headers and stretchers on the face with headers behind in the makeweight. The north end is built of headers which interlace irregularly with the headers of the sides, see Pl. 62<sup>f</sup>. The corners of the vault inside are groined. The west wall is based on a level about 2 cm higher than the east wall.

The top and all inside surfaces of the vault were heavily plastered. The interstices between the vault and the *gebel* were filled with mud.

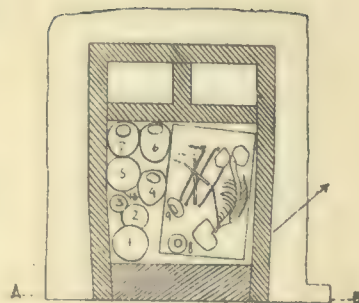
The doorway was roofed with a corbel, a continuation of the corbel of the main chamber. Or in other words, the vault was left open on the south end to form a doorway (see Pl. 63<sup>b</sup>). The doorway was blocked with a mud-brick wall 1 brick thick heavily plastered outside. Against this block, outside, was piled mud-brick (Pl. 62<sup>a</sup>) and limestone slabs (Pl. 61<sup>a, b</sup>). The door was approached by a steep grooved incline cut in the *gebel*.

The grave was found intact, Pl. 62<sup>a-d</sup>. When opened the interior was seen to be as in Pl. 63<sup>a</sup>. The floor was covered to a depth of 20 cm with debris from the roof resting on the pottery, wood rot of the coffin, etc. The only objects visible were the tops of pots 4, 6 and 7. After clearing away this debris, we found underneath it the skeleton with two pieces of alabaster (8, 9) in the outlines of a wooden coffin, and the space between the coffin and the west wall filled with pottery, one limestone bowl and bones of offerings. The end chambers were quite empty.

The skeleton was contracted on the left side head south, Pl. 63<sup>b-d</sup>, with the arms about the knees (i. e. left arm under and right arm over both legs). The skeleton was that of an old female(?) with only two teeth in the upper jaw, six in the lower, the jaw bones showing no other tooth sockets. The bones although in better condition than usual in this cemetery could not be moved. The coffin was of wood with yellow plaster. The boards appeared to be nearly 3 cm thick.

The objects found in the tomb were as follows:

1. Bowl of red polished brown ware, vertical lines inside, type xxiv, Pl. 75<sup>c</sup>.
2. Plate of red polished brown ware, type xxvi, Pl. 75<sup>c</sup>. Contained bones of offering animal (kid?), Pl. 63<sup>c, d</sup>.



147. N. 3022. Plan, 1:50.



148. N. 3022. Section A-B, 1:50.

3. Limestone bowl, Pl. 72<sup>f</sup>, a bit of rim missing.
4. Jar of red painted rough ware, type v<sup>c</sup>, Pl. 75<sup>c</sup>.
5. Cup-bowl of red polished brown ware; type xxiv<sup>c</sup>, with both horizontal and vertical lines, Pl. 75<sup>c</sup>.
6. Jar of red painted rough ware, type v<sup>c</sup>, Pl. 75<sup>c</sup>.
7. Jar of smooth drab ware, type iv, Pl. 75<sup>c</sup>.
8. Alabaster bulging jar, broken and decomposed, Pl. 72<sup>f</sup>.
9. Alabaster bulging jar, somewhat decomposed, Pl. 72<sup>f</sup>.
10. Plate of red polished brown ware, type xxvi, Pl. 75<sup>c</sup>. Contained bones of offering animal (kid?).

Outside the tomb dumped down near the stones in front was a basket, Diam. 40, H. 16 cm.

**N. 3014.** A small corbel with two small chambers on the north end and with entrance on the south end. Axis 53° east of south. *Intact tomb.* See Pl. 64, 65 and fig. 149—151.

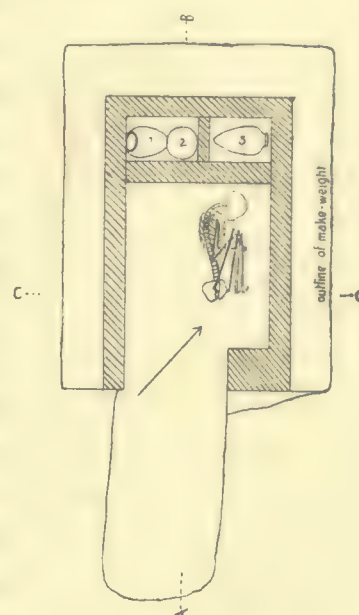
The cross walls forming the end chambers are not bonded with the main walls nor with each other but simply held in place by mud plaster. The wall parallel to the north wall is  $\frac{1}{4}$  brick thick; the small dividing wall is  $\frac{1}{4}$  brick thick (i. e. brick on edge). The corbel vault does not rest on these cross walls.

The main chamber rests in a hole cut in the alluvial strata to the limestone rock; and is corbelled on the two sides and on the north end, see fig. 151. The walls are  $\frac{1}{2}$  brick thick for 3 courses and then, where the vault begins, 1 brick thick. Above the 5<sup>th</sup> course the wall thickens to form the makeweight of the corbel. The south wall, east of the door, is thickened also but not corbelled. Owing to the slope of the limestone surface, the courses of the west wall are not on a level with those of the east wall; and therefore the brickwork at the line where the two sides of the vault meet, is irregular (Pl. 64<sup>d, e</sup> and 65<sup>a</sup>). The corbel is built of headers on all three sides. The headers of the north end running at right angles with the headers of the two sides are bonded with them rather irregularly, Pl. 65<sup>a</sup>. The corners of the vault inside are groined.

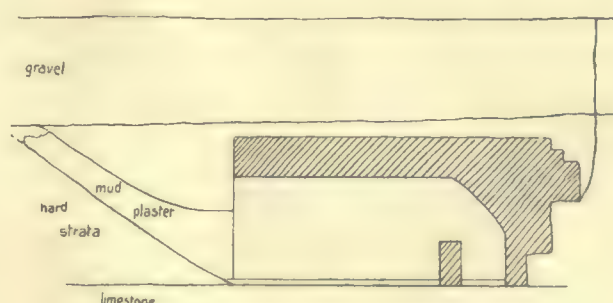
The top of the vault is heavily plastered. The interstices between the vault and the *gebel* are filled with stones and mud.

The doorway was roofed with a corbel and blocked with a wall  $1\frac{1}{2}$  brick thick heavily plastered outside. The doorway was approached by a sloping incline with the floor slightly rounded, cut in the hard *gebel* and heavily plastered.

The grave was found intact, Pl. 64<sup>a</sup>. After it was exposed, the southwest corner crumbled



149. N. 3014. Plan, 1:50.



150. N. 3014. Section A-B, 1:50.



off. The interior was seen to be as in Pl. 64<sup>c</sup>. The floor was covered to a depth of 8—12 cm with a layer of crumbled mud plaster and bricks which had fallen from the roof.

The skeleton was contracted on the left side head northwest (local north) with the hands between the knees. The floor underneath showed wood rot, sufficient to determine that there had been a coffin. The position of the bones of the right hand and of the left foot, is typical of a body which has decayed in a wooden box with hand and foot turned up resting against the side. On the bones were traces of cloth. The body had therefore been contained in a small wooden box and covered, or loosely wrapped, in cloth.<sup>1</sup>

The main chamber contained only the burial, except that near the skull there were 2 or 3 fragments of charcoal.

In the end-chambers, were:

1. Jar of rough ware, type v, Pl. 74<sup>a</sup> lower left corner, numbered by mistake 3061.
2. Plate of red polished brown ware, type xxvi. Pl. 74<sup>a</sup>.
3. Jar of smooth red ware, type iv. Pl. 74<sup>a</sup>.

**N. 3053.** A single-chamber corbel with an entrance on the north. Axis 44° east of south. See Pl. 67<sup>a, b</sup> and fig. 152—154.

The hole was cut through the alluvial strata and from 0 to 38 cm into the solid limestone, fig. 154. The corbel was roughly built of mud-brick and limestone chips. Owing to the moisture and pressure the bricks had melted and the whole vault, had evidently sunk down on itself. We found the brickwork almost a solid mass of mud. The bones and pottery in the south end lay nearly undisturbed underneath a layer of debris from the roof. The door block was gone and the objects in the north end seemed considerably disturbed. So it is clear that the tomb had been plundered anciently.

The doorway was roofed with a corbel see Pl. 67<sup>a</sup>. The approach was a plastered incline.

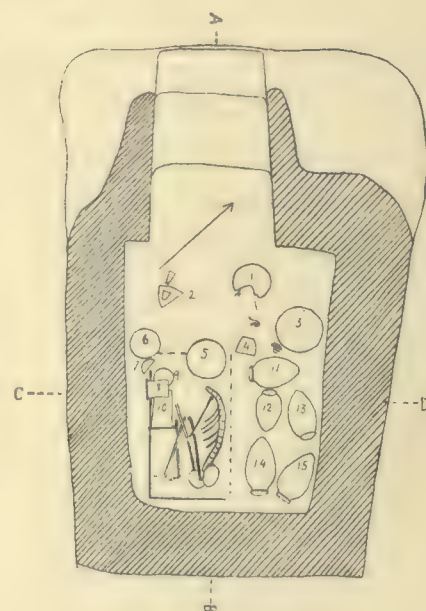
The skeleton was contracted on the right side, head to the north. The skull was missing. The body was in a wooden box with boards 2 cm thick the sides of which overlapped the ends. The jars 8—10 may have been in the coffin originally. The objects 5—7 seem to owe their position to some disturbance of the tomb. Scattered at various points were bones of a small offering animal (kid?).

The objects in the tomb were:

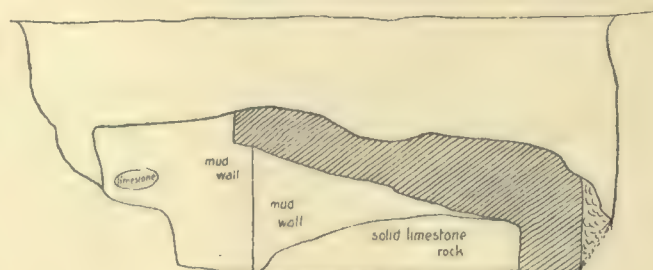
1. Plate of red polished soft red-brown ware, type xxvi. Diam. 24 : h. 6 cm.



151. N. 3014. Section C—D, 1 : 50.



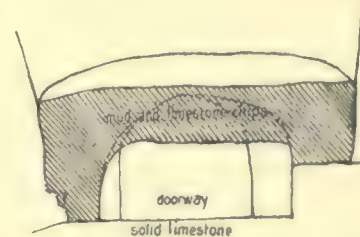
152. N. 3053. Plan, 1 : 50.



153. N. 3053. Section A—B, 1 : 50.

<sup>1</sup> Loose wrappings were found on burials of the 4<sup>th</sup>—6<sup>th</sup> dynasties in cem. 700, 100 and 3500.

2. Bowl of red painted soft red-brown ware, type xxiv<sup>c</sup>, not polished, with ring depression like that of stone bowls in bottom inside, in fragments. Diam.  $23\frac{1}{2}$  : h. 14 cm. Near it, shoulder blade of kid (?).
3. Slate bowl, with curved rim and with ring depression in bottom inside, Pl. 72<sup>e</sup>. Diam. 30 : h.  $6\frac{1}{2}$  cm.  
Near 3 and 4, bones of kid (?), backbone, legs, ribs.
4. 7. Alabaster cup. Diam.  $14\frac{1}{2}$  : h. 11 cm.
5. Alabaster plate, broken but complete, Pl. 72<sup>e</sup>. Diam.  $24\frac{1}{2}$  : h. 4 cm.
6. Alabaster bowl, without rim or ring depression, Pl. 72<sup>e</sup>. Diam. 20 : h. 10 cm.
7. See 4.
8. Alabaster cylindrical jar without cord, Pl. 72<sup>e</sup>. Diam. 18 : h. 16 cm.
9. Alabaster cylindrical jar, without cord, Pl. 72<sup>e</sup>. Small break on side, next to the base, mended anciently by inserting a small piece of alabaster and fastening it with cement. Diam. 12 : h. 20 cm.
10. Alabaster cylindrical jar, without cord, Pl. 72<sup>e</sup>. Diam. 18 : h. 24 cm.
11. 14. 15. Jar of red painted rough ware, type v<sup>a</sup>. Diam. 20 : h. 33 cm.
12. 13. Jar of red painted rough ware, type v<sup>e</sup>. Diam. 18 : h.  $33\frac{1}{2}$  cm.
14. 15. See 11.



154. N. 3053. Section C—D, 1 : 50.

In the debris of the mouth of the vault was found a jar of type iv, see Pl. 75<sup>e</sup> and fragments of red polished ware.

**N. 3015.** A small single-chamber corbel vault with an entrance on the west side. Axis  $44^\circ$  east of south. See Pl. 67<sup>e, f</sup> and Fig. 155, 156.

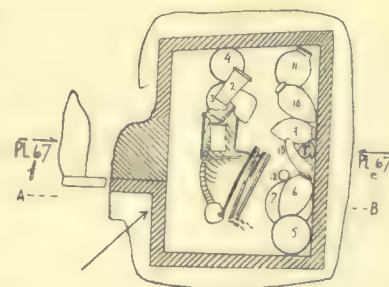
The brickwork was crushed and uncertain; but the wall was only  $\frac{1}{4}$  brick thick below. Above, it thickened to 1 brick thick but was preserved to a height of only ca. 70 cm. The corners were rounded above (like 3023). Limestone chips were built into the brickwork especially at the south end.

On the west side, the southern side of a doorway was plainly visible, see Pl. 67<sup>e</sup>; but the northern side was indistinguishable in the melted mass of brickwork of the doorblock and the vault. On the west side of the hole at a height of about 100 cm above the floor of the vault was a layer of plaster on debris as if the entrance had been sealed again at this level with plaster.

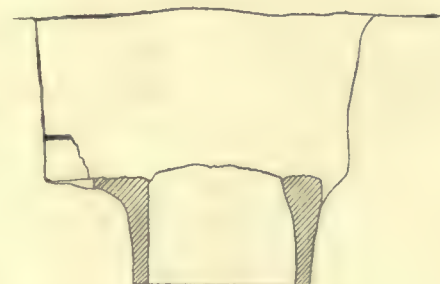
The skeleton was contracted on the left side, head *north*. The pots in front seemed little disturbed. In fact, there was no disturbance anywhere which could not be explained by the collapse of the roof.

The objects with the skeleton were:

1. Alabaster cylindrical jar, rim broken, no cord, Pl. 72<sup>e</sup>. Diam. 14 : h. 23 cm.



155. N. 3015. Plan, 1 : 50.



156. N. 3015. Section A—B, 1 : 50.



2. Alabaster cylindrical jar, rim broken, no cord, Pl. 72<sup>c</sup>. Diam. 17 : h. 27 cm.
3. 4. Plate of red polished red ware, type xxvi. Diam. 24 : h. 4 cm.
5. Bowl of red polished red ware, vertical lines inside, type xxiv<sup>b3</sup>. Diam. 26 : h. 12 cm.
6. 10. 13. 14. Jar of red painted rough ware, type v 10. Diam. 25 : h. 34 cm.
7. Alabaster bowl, with curved rim and with ring depression in bottom inside, Pl. 72<sup>c</sup>. Diam. 32 : h. 9 cm.
8. Alabaster jar with shoulder, Pl. 72<sup>c</sup>. Diam. 9½ : h. 11½ cm.
9. Jar of red painted rough ware, type v 10. Diam. 20 : h. 36 cm.
10. See 6.
11. Bulging jar of smooth red painted brown ware, type ix 5. Diam. 21½ : h. 26½ cm.
12. Volcanic ash cup with recurved rim and hole in rim for spout, Pl. 72<sup>c</sup>. Diam. 7 : h. 6 cm.
13. 14. See 6.

**N. 3063.** This was a hole about 220 × 140 cm and 160 cm deep. Axis ca. 43° east of south. On the north end of the west side were the remains of a door with doorblock of mud-brick. This was then *undoubtedly* a small corbel with entrance, see Map III.

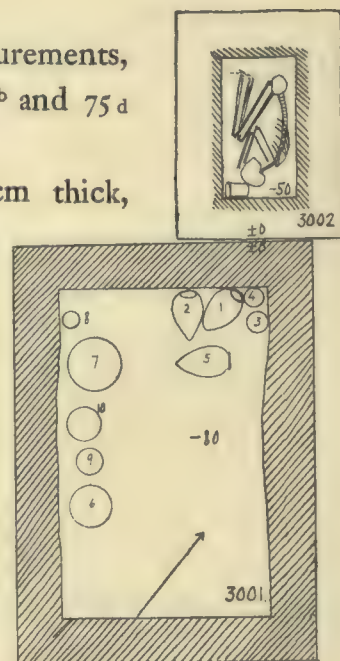
## 6. Indeterminable Graves.

**N. 3001.** A mud brick well, 220 cm long, and 140 cm wide, inside measurements, and about 80 cm deep. Axis 53° east of south. See 3002. See Pl. 57<sup>b</sup> and 75<sup>d</sup> and Fig. 157. Cleared by GREEN.

The walls were mere masses of melted brickwork about 30 cm thick, packed with mud debris so that the inner surfaces of the wall could not be distinguished. Therefore if there was an entrance, it also could not have been distinguished. The size of the chamber makes it probable that there were end-chambers. The situation on the southern slope of the mound points to a ground plan analogous to 3022 but the contents of the tomb (although no slate or volcanic ash was found) point rather to an analogy with 3017, 3013, 3015. In view of these considerations, we have here probably a corbel vault with end chambers on the north end and with an entrance either on the south end or on the south end of the west side.

The following objects were found. Nos. 1 and 2 were in the dirt 10 cm and 20 cm respectively above the floor. The rest were on the floor.

1. 2. 5. Jar of rough ware, type v<sup>b</sup>.
3. Alabaster cylindrical jar, Pl. 72<sup>a</sup>. Diam. 14 : h. 24 cm.
4. Alabaster drum-shaped jar, Pl. 72<sup>a</sup>. Diam. 13 : h. 4 cm.
5. See 1.
6. Limestone bowl, Pl. 72<sup>a</sup>. Diam. 28 : h. 10 cm.



157. N. 3001 and 3002. Plan, 1 : 50.

7. Limestone bowl, Pl. 72<sup>a</sup>. Diam. 36 : h. 7 cm.

8. Alabaster cylindrical jar with cord, Pl. 72<sup>a</sup>. Diam. 11 : h. 15 cm.

9. 10. Plates of red polished ware, type xxvi.

In the dirt was a fragment of a large jar type iii. About 10 cm to the west of 3001, about halfway between 3001 and 3021 were four stone vessels, lying in the loose gravel about 50 cm above the level of the top of the walls of 3001, Pl. 73<sup>a</sup>, see N. 3150.

**N. 3002.** This was the lower part of a mud-brick substructure of indeterminable character. Axis 53° east of south (like 3001).

This may be a burial subsidiary to 3001, see fig. 157. The walls practically touched the wall of 3001. The floor was about 30 cm above the floor of 3001. The walls were about 30 cm thick but the brickwork was melted. It seems, however, to have been a corbel vault of some sort (but cf. 1538, 1607).

The skeleton, which was in very bad condition, was tightly contracted on the left side head south, nearly filling the chamber. There were traces of a wooden coffin under the skeleton; and that suggests that the grave may have had a mud brick cover built around and on top of a wooden box, cf. 1538, 1607.

On the body were small scraps of charcoal. At the head was an alabaster cylindrical jar, rough without cord, Pl. 72<sup>f</sup>.

**N. 3055.** Rectangular, mud brick well, axis 62° east of south. Noted by GREEN. Walls  $\frac{1}{2}$ -brick thick all stretchers and 70 cm high. There was probably a wood roof. Bricks 24 × 12 × 7 cm without straw; yellowish mortar.

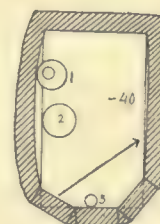
Skeleton, tightly contracted on left side head south, old male with ossified vertebrae. No pots or other objects were found.

**N. 3024.** This was the lower part of a mud brick structure of indeterminable character. Axis 61° east of south. Perhaps like 3015. See Fig. 158.

The wall was  $\frac{1}{2}$  brick wide, except that the two lower courses were stretchers on edge, and 42 cm high. The corners were rounded above the second course. The bricks were about 28 × 14 × 7 cm. There was no trace of body.

On the floor were:

1. Jar of rough ware, type v<sup>c</sup>. H. 35 cm.
2. Plate of red polished ware, type xxvi. Diam. 22.
3. Alabaster jar with shoulder, Pl. 72<sup>b</sup>. Diam. 5 : h. 11 $\frac{1}{2}$  cm.



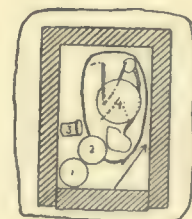
158. N. 3024.  
Plan, 1 : 50.

**N. 3051.** The lower part of a mud-brick substructure of indeterminable character. Axis 46° east of south. See Pl. 69° and Fig. 159. Cleared by GREEN.

The corners were rounded and the two north corners were strengthened by limestone chips (cf. 3053, 3013, 3012). It was therefore probably a corbel, apparently with an entrance on the south end.

The collapse of the roof had crushed the skeleton; but it was clearly contracted on the left side head south, and had been in an oval mud coffin.

The broken alabaster dish, no. 4, was on the skeleton. The rest of the objects were on the



159. N. 3051.  
Plan, 1 : 50.

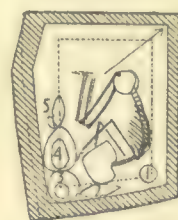


floor in the southwestern corner, see Pl. 69<sup>c</sup>. Under the body were some fragments of slate.

1. 2. Bulging jars of smooth red painted brown ware, type xx<sup>c</sup> with flat base, Pl. 75<sup>c</sup>. H. 25 cm.
3. Alabaster cylindrical jar, Pl. 72<sup>d</sup>. Diam. 12 : h. 15.
4. Alabaster dish, with curved rim and with ring depression, Pl. 72<sup>d</sup>. Diam. 32.

**N. 3023.** A small single-chamber well, with bulging walls unlike any other known grave. Axis 40° east of south. See Pl. 69<sup>f</sup> and fig. 152—154.

The brickwork begins with a course of stretchers on the west side and a course of bricks on end, flat side out, on the other three sides. Above that, the courses are as in fig. 161, laid so that the two northern corners are rounded. The first few courses recede slightly so that the vault is wider at 40 cm above the floor than it is at the floor. At the southern end the corners are square inside and outside. This has the appearance of a corbel vault but GREEN who was present at the clearing of the interior was convinced by the quantity of rotten wood in the chamber and on top of the walls that there was a wooden roof on top of the present walls. As the contents shows, the tomb was certainly not later than the second dynasty.



Plan, 1 : 50.



Section, 1 : 50.  
160—162. N. 3023.



Pot-  
mark.

The skeleton was contracted on the left side, head south with the pottery at the head and in front. On the bones and below them was wood so that there was a coffin which contained the body and the alabaster jar. On the bones were also traces of cloth. The bones were those of an adult but the sex was indeterminable.

The objects found in position on the floor were:

1. Alabaster cylindrical jar, with cord, type S 1<sup>a</sup>. Diam. 14 : h. 15 cm.
2. Bowl of red painted brown ware, not polished, type xxiv, Pl. 75<sup>b</sup>.
3. Jar of rough ware, type v. Finger marks below, not scratches, Pl. 75<sup>b</sup>.
4. Like 3, type v<sup>c</sup>. Broken.
5. Plate of red polished brown ware, type xxvi, Pl. 75<sup>b</sup>.

In the dirt in the tomb was found a number of fragments of types xxi<sup>a</sup>, xxvi and one piece type iii with a potmark (like a 9⊥ sign on its side), see fig. 162 above.

**N. 3021.** A mud brick well about 55 cm high in a hole 110 × 67 and ca. 70 cm below old surface. Axis ca. 45° east of south. See Map III.

The walls contained six courses — three stretcher courses below, then a header course a double stretcher course and a header course.

There were remains of a skeleton contracted on the left side head south. No objects were found. The stone vessels, N. 3150, were between this grave and 3001.

**N. 3072.** A mud brick well, 117 × 80 cm and about 62 cm high. Axis 48° east of south.

The walls contained nine courses — six stretcher courses and then a header course, a double stretcher course and a header course.

**N. 3093.** This was a hole  $180 \times 130$  cm and about 80 cm deep. Axis  $47^\circ$  east of south.

The difficulty lay in determining where the old surface was, see Pl. 68<sup>c,d</sup>. Around the top of the hole was a wall which may have been the remains either of a lining wall or of a superstructure. It appeared to me to be part of a superstructure, just outside the north wall of which was the subsidiary burial 3092. This superstructure fragment was about 100 cm above the top of the substructure 3021 which lies immediately south, see Pl. 57<sup>c</sup>. The well which once lined the hole must then have been torn out by lime-burners or plunderers.

**N. 3094.** This was a small substructure with  $\frac{1}{2}$ -brick walls about 30 cm high. Axis  $57^\circ$  east of south. A few scattered bones were found.

**N. 3003.** Rectangular hole, lined below with brickwork and slabs of limestone. Axis  $55^\circ$  east of south.

The lining was found partially destroyed (see Pl. 61<sup>a</sup>). The east wall was ca. 50 cm high built of stretcher courses. The line of the north wall was held by two limestone slabs. The roof was perhaps of stone slabs.

The skeleton was contracted on the left side, head to the south.

With the burial were the following:

1. 2. Jars of red painted rough red or brown ware, type v. H. 35 cm. No. 2 had finger marks on base instead of scratches.
3. Alabaster cylindrical jar without cord, Pl. 72<sup>f</sup>. Contained mud to half its height. H. 16.



133. N. 3003,  
1:50.

## 7. Pottery and mud box burials.

**N. 3018.** A pottery box in a hole cut to a depth of ca. 75 cm below the level of the base of the superstructure walls of 3017, see fig. 138 and Pl. 57<sup>d</sup>, 68<sup>a</sup>. Axis  $40^\circ$  east of north, parallel to the south wall of the superstructure of 3017. The box must have been either under the wall or immediately next to it under the floor of the enclosure.

The box was  $78 \times 53 \times$  H. 35 cm, rectangular with square corners, rim slightly thickened. The thickness of the walls was about 2 cm. The material was red painted, hard baked red ware.

The skeleton, young adult female, was contracted on the left side head north-east (local east). About the neck were beads (no. 4); in the northwestern corner was a small pot (no. 1); and outside the west end were two jars (nos. 2, 3).

1. Small jar with shoulder, of smooth pink ware, with rounded bottom, type xiv<sup>c</sup>. H. 16 cm.
2. 3. Jars of rough ware, type v<sup>c</sup>, Pl. 74<sup>a</sup>.
4. Beads, Pl. 73<sup>c</sup>, below: limestone or shell beads,—3 shell shaped, 1 pendant, 4 disc beads; glazed beads,—3 disc beads, 10 cylindrical or spherical beads; carnelian,—1 large barrel-shaped bead (broken in two), 3 more or less barrel-shaped beads; unpolished carnelian,—a long string of thick discs, varying from pink to red.

**N. 3061.** A pottery box was on the eastern limit of the cemetery at a depth of only 80 cm. Axis  $46^\circ$  east of south. See Pl. 68<sup>b</sup> and fig. 163.

The box, round cornered but not elliptical, was  $96 \times 56 \times$  h. 53, of hard red ware, red



painted and with thickened rim, see Pl. 68<sup>b</sup>. The pottery lid was found broken in the box. It had two pairs of handles, cavities made in the clay of the upper side, see fig. 163<sup>b</sup>. The rim was cut out on the underside to fit the rim of the coffin.

The skeleton was contracted on the left side head to the south. Under the body were remains of several thicknesses of cloth. The bones were those of a young adult female. About the neck were some beads from a bracelet or necklace (no. 2); and in the coffin were two alabaster jars (nos. 1, 3).



163. N. 3061.  
Plan, 1 : 50.

1. Alabaster bulging jar, *dummy*, Pl. 72<sup>f</sup>, see type S III. H. 10.
2. Beads from a necklace, or from a bracelet on the left arm, Pl. 73<sup>c</sup>: carnelian, — a number of barrel shaped and disc beads; shell, — 3 disc beads; 1 syenite (?) pebble pendant; 1 copper disc, 1 blue glazed bead and 1 blue glazed pendant or amulet.
3. Alabaster cylindrical jar, with cord. Diam. 10.

In the dirt in the coffin were:

4. Frag. of alabaster cylindrical jar with cord. Diam. 11.
5. Bowl of red painted red ware, not polished, type XXIV<sup>b</sup>. Diam. 21½ : H. 9½ cm.
6. Plate of red polished brown ware, type XXVI. Diam. 27 : h. 6 cm.

**N. 3091.** A small mud box next to the north end of and on a level with the top of the wall of 3093 as now preserved. Axis 38° north of east. See Pl. 68<sup>c, f</sup> and fig. 164.

The box which was ca. 65 × 30 × H. 15, had rounded ends but parallel sides. The walls were about 2 cm thick.



164. N. 3091.  
Plan, 1 : 50.

The skeleton, a child, was contracted on the left side head to the north-east (local east) face towards 3093. About the neck were remains of two distinct strings of beads (no. 1). In the coffin was a small alabaster jar (no. 2). Just outside was a pot (no. 3), in removing the dirt of which I found the wooden cylindrical seal (no. 4).

1. Beads: a string of small cylindrical blue glazed beads; a string of larger blue glazed disc beads; two carnelian disc beads; and one steatite (?) cylindrical bead.
2. Alabaster cylindrical jar without cord, Pl. 73<sup>a</sup>. Diam. 8 : h. 7½ cm.
3. Bulging jar of greenish white ware, type XX, Pl. 74<sup>a</sup>. Diam. ca. 19½ : h. ca. 27½ cm.
4. A half decayed wooden cylinder, Pl. 43. Found in the dirt in no. 3.

**N. 3026.** An oval mud box was at the northeastern corner of 3016 but on a level 104 cm above the floor of 3016 and about 30 cm above the top of the walls. Axis 63° east of south.

The mud box was oval, 80 × 56 × H. ca. 20 cm. The walls were 2 cm thick.

The skeleton of a child was contracted on the left side head south.

## 8. Burials in holes.

**N. 3025.** An irregular shallow hole containing a few bones of a contracted burial of a child which had been on the left side head south, about 40° east, see Pl. 75<sup>d</sup>. The bones rested on a mass of decayed organic matter showing traces of cloth and wood.

At the head end was part of a red polished bowl. At the knees, were two small alabaster jars (1, 2). On the south side of the bones a lot of beads were scattered (3).

1. Alabaster jar with handles, Pl. 72<sup>b</sup>.
2. Alabaster jar, Pl. 72<sup>b</sup>. The rim was of a separate piece and was left off in the photograph by mistake, see Pl. 75<sup>d</sup>.
3. Beads: a number of small polished carnelian and garnet beads, in form thick discs.

N. 3019. Adjoining 3018 on the east was a contracted burial nearly on the same level and partially inclosed in limestone slabs, see Fig. 138.

The skeleton lay on the left side head west. No trace of wooden coffin was found, but in cem. 700 slabs were in several cases laid against wooden coffins which were simply covered with earth in order to protect them. This burial is I believe contemporaneous with the fourth dynasty shafts.

N. 3092. In a shallow oval hole was a contracted burial on left side head south, ca. 22° east, Pl. 68<sup>c, d, f</sup>. In these photographs, the upper stratum found cut to pieces by lime burners had been removed. The old level is probably 60—100 cm above the level shown in the photograph.

N. 3150. Between 3021 and 3001, we found a group of stone vessels, Pl. 75<sup>d</sup>, in the loose gravel under the limekiln debris, apparently just under the ancient surface. It is probable that they had been pulled out of 3001.

1. Alabaster jar with shoulder and concave base, type S x, Pl. 73<sup>a</sup>.
2. Soft black stone, a thin bowl, Pl. 73<sup>a</sup>.
3. Alabaster jar with shoulder, made in two pieces, type S iv, Pl. 73<sup>a</sup>.
4. Fragments of alabaster jar with shoulder, Pl. 73<sup>a</sup>.

## IX. BURIALS.

Preservation.

THE burials in cem. 1500 had been almost all destroyed by plundering. In the large tombs only three burials were preserved (1532, 1513 two); and these three, owing to their depth below the surface and consequent exposure to the moisture of the yearly inundation, were badly decayed. The better examples of the small tombs were almost all plundered. Consequently the majority of skeletons found were those in the poorer, more shallow graves, especially those in the mud and pottery coffins. And it is obvious that burials in closed coffins if placed in the grave after being closed would be especially liable to errors of orientation.<sup>1</sup> In cemetery 3000, a number of intact graves were found and consequently the material is more abundant. But even here no skeleton was found well enough preserved to permit its removal.

The following summary gives all the burials found. The burials in mud, pottery or wooden boxes are marked with a star \*. *All these burials were contracted and all but one (1535) were on the left side.*

<sup>1</sup> These coffins did not show any mark like the eyes on the later coffins, which could indicate the position of the body in the coffin.



On the left side.				On the right side.
Head south	Head north	Head east	Head west	Head south.
1513a 3022	1531 <sup>9</sup>	3012	1525 I*	1535 (disturbed).
1513b 3023*	1636*	3013 (?)	1525 II*	
1532 3025	1635*	3018*	1602*	
1604 3026	3014*	3091*	1646*	
1562 3051	3053*	4 cases.	1645	
1592 3052	5 cases.		3019	
1585* 3054			6 cases.	
3002 3055				
3003 3061*				
3016 3071				
3021 3013(?)				
22 cases.				

*Burials contracted on left side, head south.* In spite of the paucity of this material, it is perfectly clear (1) that *burial in a contracted position on the left side was customary*, (2) *that the orientation towards the local south was the preferred orientation* or even the normal orientation if we disregard the box burials. The position of the hands and the feet was not uniform either in these burials or in those of the preceding and succeeding periods. It may be said however that hands were very often before the face in the predynastic period. In the 3<sup>rd</sup>—4<sup>th</sup> period, one or both hands are sometimes between the legs or around them.

*Comparison with burial position of other periods.* This conclusion corresponds entirely with the known predynastic custom of burying in a contracted position on the left side head south to which there were however some exceptions. It corresponds also with the positions in Petrie's M cemetery at Abydos, with the subsidiary royal burials at the same place, with the second dynasty burials at el Amrah and, as will be seen from the following table, with the second to fifth dynasty burials at Naga-ed-Dêr and Gizeh.

Dyn.	Cem.	On left side Head south	On left side Head north	On left side Head east	On left side Head west	On right side Head south	On right side Head west	On Back
1—2	N. 1500—3000	22	5	4	6	1	—	—
2—3	N. 3500	71	—	—	—	2	1	—
3	N. 500	61	6	1	2	—	1	—
4	N. 700	7	7	—	—	—	—	—
4—6	Gizeh	—	134	—	5	—	4	12

The burials in cem. 3500 and 500 are tightly contracted as a rule, often with head bent down on the knees. In 700 and at Gizeh the contraction is often relaxed. In the larger tombs even as early as the Cheops period, the burials are extended on the left side head north and the later intruded pits of the 6<sup>th</sup>—7<sup>th</sup> dynasties often have the burials on the back. The earliest dated burial extended on the back which we have found was in N. 3501(?); dated by a large alabaster jar bearing cartouches of Unas and Teti. In the 6<sup>th</sup> to 12<sup>th</sup> dynasties, the extended burials (on side or back) became customary but the poorest burials were still contracted usually on the left side, probably for reasons of economy though possibly not without being influenced by

the older custom. To state it in another form, the older custom was preserved in poor burials probably for reasons of economy. But these poor contracted burials of the later period were not usually so tightly contracted as the older burials; for the femurs were at right angles to the body while the knees were bent tightly bringing the heels up near the pelvis,— i. e. *approximating as nearly as the space permitted the position of the extended burial*.<sup>1</sup>

Very little evidence of wrappings was preserved in cem. 1500 and 3000. In 1525 II, 3012 *Wrappings* and 3014, there were fragments of cloth clinging to the bones in places. The skeleton in 3061 lay on several thicknesses of cloth (moderately fine woven linen). The skeletons in 3023 and in 3025 had thicknesses of cloth over and under them *but were not wrapped*. In 1532 and 1513, there was some dark organic matter under the bones but whether from mat, cloth or wood could not be determined. But this does not mean that there were no cloth coverings on the other burials. Cloth and even wood might disappear utterly in this moist soil just as the tissues of the body have disappeared. A comparison of the burials in the various 6<sup>th</sup> dynasty cemeteries of this site shows exactly what may have happened. The 6<sup>th</sup> dynasty tombs of cem. 700 being in low-lying gravel strata have in most cases lost entirely all trace of tissue, cloth and wood while the 6<sup>th</sup> dynasty tombs of cem. 100 being in high dry limestone contained dried skin and sinews, masses of clothes and even in one case a fine veil. *The traces of wrappings found justify therefore the conclusion that these burials in cem. 1500 and 3000 were loosely folded in several thickness of shawl-like cloth after the manner of the 4<sup>th</sup> dynasty contracted burials*. The limbs were not wrapped separately.<sup>2</sup> The 4<sup>th</sup>—5<sup>th</sup> dynasty extended burials on the side were usually folded up in a shirt or in cloth in the same way and covered with masses of shawls. It was not *customary* until the 6<sup>th</sup> dynasty to wrap the limbs separately.<sup>3</sup>

Wood, mud, pottery coffins and basket work coverings were preserved in the following cases: *Coffins*.

Wood: 1538, 1538a, 1582, 1531a; 3002, 3014, 3022, 3023, 3053. The joints were overlapping or grooved but *not bevelled*.

Pottery: 1525 II, 1640, 1585; 3018, 3061. The coffins in 1640 and 1585, both of which are probably later graves (3—4 dyn.) are oval; the coffins in 1525 II, 3018, 3061, certainly of the 1—2 dynasties are rectangular, though 3061 has round corners.

Mud: 1636, 1525 I, 1602, 1646, 1536; 3091. These are *all of the rectangular form* though 1536 and 3091 have rounded corners. N. 3026, 3051 were *oval in form*.

Basket: 1635. Mud lined oval basket.

Mat: 1636a.

Evidence as to the older, large tombs was lacking. In the predynastic graves<sup>4</sup>, the wooden boxes were apparently built in the graves and not treated as portable coffins. It is therefore possible that the burials in the wood-roofed tombs were either enclosed in boxes or simply laid on the floor in their loose cloth wrappings. Both customs, even, may have been followed.

<sup>1</sup> This question will be dealt with in detail in later volumes, see MACE, *Early Dynastic Cemeteries II*, Chapter on *Burials*.

<sup>2</sup> These early loose wrappings would disappear more easily under the influence of moisture than the later tight wrappings forming massive rolls of cloth about the limbs.

<sup>3</sup> The beginning of the later more expensive method of wrapping is to be found of course in the tombs of the great and wealthy before the method became generally customary.

<sup>4</sup> N. 7000 and Mesaid.



Continuance  
of  
predynastic  
burial  
customs.

This whole material is certainly small. But all there is, shows a simple continuance of predynastic burial positions. The replacement of wooden grave-casings and mat or skin outer wrappings by brick chambers and wooden boxes is a perfectly natural one undoubtedly based on advances in technical skill — the arts of brick building and of copper working. The first rendered mats and skins superfluous by providing that dirt-free space towards which there was a manifest striving in the wood-roofed and wood-lined predynastic graves; and the second gave greater facilities for working wood into portable boxes. There is not a bit of evidence pointing to the influence of a foreign race. Furthermore the burials of the 3—4<sup>th</sup> dynasty, as will be shown in the later volumes of this series, present only a perfectly natural continuance of the burial position and customs of this period. The earlier orientation of the body towards the *south* was not at any time a hard and fast rule; and the change in orientation towards the *north* in the fourth dynasty is not *a priori* inexplicable on the ground of internal developments. Whatever else there was of change finds its sufficient explanation in the advances in native technical skill.

## X. POTTERY.

Kinds  
of clay.

THE pottery found in these two cemeteries, 1500 and 3000, is all hand made (i. e. hand turned not wheel turned). The material is of three qualities and the treatment varies greatly with the material.

- a. Mud. Types xxix<sup>1-3</sup>, which are not abundant, are made of Nile mud (field earth) only slightly baked. This material is used in the predynastic period (see type xxix) and more or less in all succeeding periods especially for the *tj*-pots of the 2<sup>nd</sup> to 6<sup>th</sup> dynasties.
- b. A dark mixture which seems to have a large percent of river mud (or something similar). When soft baked, this appears as a brown ware; and when hard baked, as a red ware, red on the surface to a depth of 1—3 mm and black inside. It is usually painted with a red haematite wash. (1) Certain forms are smoothed only with the hand in turning: types iii, v, vi, vii, viii, ix<sup>2-4</sup>, xiii, xiv, xx, xxvii, xxviii. (2) A few hard baked forms are smoothed with a pebble (not polished): types xv, xix, xxi<sup>a, c</sup>, xxii. (3) Certain other forms, usually soft baked, are pebble polished: types ii, xi, xii, xxi<sup>b</sup>, xxiii, xxiv<sup>a-c</sup>, xxv, xxvi. This material approaches in the best examples of types iii, ix<sup>2-4</sup>, very closely to the poorer examples of material c. It is, in fact, very difficult to draw the line between *b* and *c*. In the predynastic period material *b*, was used for the red polished pottery, black polished pottery and the rough faced pottery and in the succeeding periods later than 2<sup>nd</sup> dyn. for red polished pottery.
- c. A light well-kneaded mixture containing a larger or smaller percent of light clay or *tafl*. The ware varies according to the baking and the proportion of clay from pink or faint greenish white to drab or light brown. The surface is smooth, in some cases apparently smoothed with the wet hand before baking. The surface is sometimes painted red. This ware is in no case so good as the predynastic wares of similar material (wavy handled, L 36, 38, 40) but is, nevertheless, in many cases a distinct imitation of the

older ware, types I, IV, IX<sup>1,5</sup>, X, XVI, XVII, XVIII. In the later periods especially from the 12<sup>th</sup> dynasty onwards, this material is used with increasing frequency down to the Kenh and Ballâs wares of the present day.

### Types of pottery.<sup>1</sup>

Type I = 1532, 33 (potmark *a*).<sup>2</sup>

2 = 1532, 13(*c,d*), 14(*b*); 1506, 1(*e*), 2(*f*).

3 = 1532, 16.

The pot mark *e* was made before baking; the others after baking. The lines of the pot-marks are drawn from right to left or from top to bottom. For pot-mark *e*, cf. *R. T. I*, Pl. 46, 111–156 (from tombs W, Y, T, X, U, Q) and *R. T. II*, Pl. 55, 16–26 (from tombs O, T, X, V).

Hard, fine-grained, reddish ware, interior dark brown; smoothed wet outside; *usually with inscription*. This is a well-made practical jar suitable for holding beer or grain.

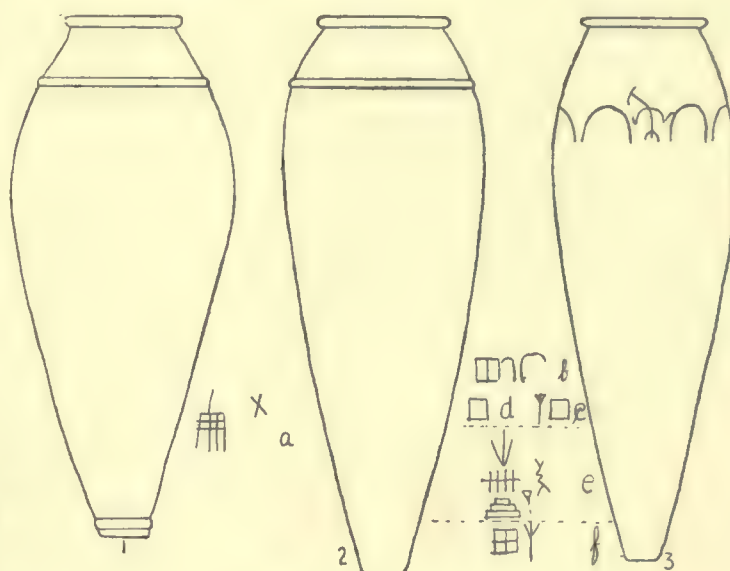
See Petrie, *R. T. I*, Pl. 39, 1–12; *Abydos I*, Pl. 36–41.

In form it has no direct predynastic prototype, but may be a modification of one of the larger wavy handled jars (Petrie, W. 31, 33); or, on the basis of its function as a beer jar and its material, it may have descended from the long late jars (Petrie, L 36) of hard pink ware. There are two examples of copies in alabaster, one with a rope net, found by Amelineau at Abydos, *II Origines* Fig. 822–823. In our tombs this type ceases abruptly with the wood-roofed tombs. At Abydos, it degenerates rapidly into a long cylindrical jar with two rings in the tomb of Khasehemui, a type found also at Mahasna in the third dynasty (see *Mahasna*, XXXI, 21–26). A still further degeneration is possibly to be found in a cylindrical pot with a slight ridge on the shoulder found by us at Gizeh.

Type II = 1532, 12; 1512, 23.

Red painted, soft brown ware with an even dull pebble-polish. Experiments with polished jars of material *b* of the predynastic period show that these jars are porous and may have served, like the modern polished jars of Mexico, as jars for *cooling liquids*. See Petrie *R. T. I*, Pl. 40, 10.

In form, this jar has no direct predynastic prototype, although there is a smaller red polished jar of similar proportions. In our tombs, it occurs only in the large wood-roofed types.



165. Type I, 1 : 10.



166. Type II.

<sup>1</sup> In the lists of pots the first number given, after the type-number is the one shown in the figure. The numbers of corbel vaults are marked with a star \*.

<sup>2</sup> Type I occurs in two cemeteries near Gizeh.

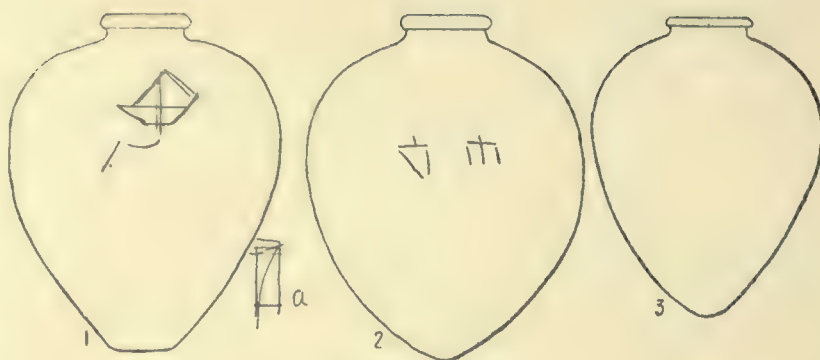


Type III 1 = \*1513, 90 (*a* is on opposite side).

2 = \*1513, 88, 89.

3 = \*1514, 30, 46; \*1586, 11.

Smooth, red painted, brown ware. This jar is still suitable for grain; but is not so strong as the predynastic prototype. See Petrie, *Abydos I*, Tomb M 14 on Pl. 39 and Pl. 33, 127–139; *Abydos II*, 44, 96.



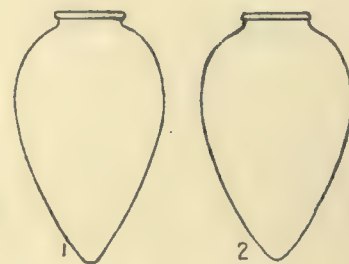
167. Type III, 1 : 10.

Exactly the same form occurs in the late predynastic period (Petrie L 46, 47, and at el-Ahaiwah). The form occurs in 4<sup>th</sup>–6<sup>th</sup> dynasty tombs at Naga-ed-Dêr and Gizeh. Similar forms are found in later tombs (12<sup>th</sup> to 18<sup>th</sup>).


Type IV 1 = 1525, 32 and X; \*3015, 16; \*1605, X.

2 = 1629, 1; \*1614, 1, 2; \*1513, 71; \*3014, 3; \*3022, 7.

Smooth hard, fine-grained reddish brown ware, a manifest attempt to reproduce the hard pink or white ware of the late predynastic period. The type is a degeneration of the prototype, Petrie L 36, but still a jar suitable for grain and possibly liquids also<sup>1</sup>. See Petrie, *R. T. I*, Pl. 40, 17, 26, 27.



168. Type IV, 1 : 10.

Exactly the same type occurs in the late predynastic period but, as said above, of better material (Petrie L 36) and accompanied by greater variety of form. In the Cheops tombs at Gizeh, especially in the tomb of the Prince , we found a jar resembling this type in form and material. The type seems, however to have merged in type v, although in cem. 1500 and cem. 3000 both types occur side by side in the same tomb (see 1614, 3022 etc.).

Type V 1 = 1532, 65, 59–64, 69–78; 1602, 6; \*1514, 31; \*1622, 9; 1616, 5; \*1630, 1; \*3053, 11, 14, 15.

2 = 1525, 22; \*1562, 7, 8; \*1571, 10, 18, 21; \*1584, 9, 10; \*1572, X; \*1614, 2; 3003, 1.

3 = \*1514, 32–45; 1602, 4, 5; 1636, 1, 2; \*1611, 1; \*1882, 9, 10; \*1605, 15, 17–21; \*1626, 1–6; \*1586, 5; \*1633, 1–4; 3001, 1, 2; 3003, 2; 3011, 4, 8, 9; \*3014, 1–3, 5; 3054, 1; 3071, 1–3.

4 = 1602, 5; 1512, 17; \*1513, 7, 8, 10, 13, 73, 77; \*1615, 7; 3018, 2.

5 = \*1622, 8.

6 = \*1605, 16; 1616, 4; \*1630, 2.

7 = 1512, 10, 60 (58, see type vi); 3018, 3.

8 = \*3017, 1–19; \*3013, 8, 9, 11, 13; \*3053, 12, 13.

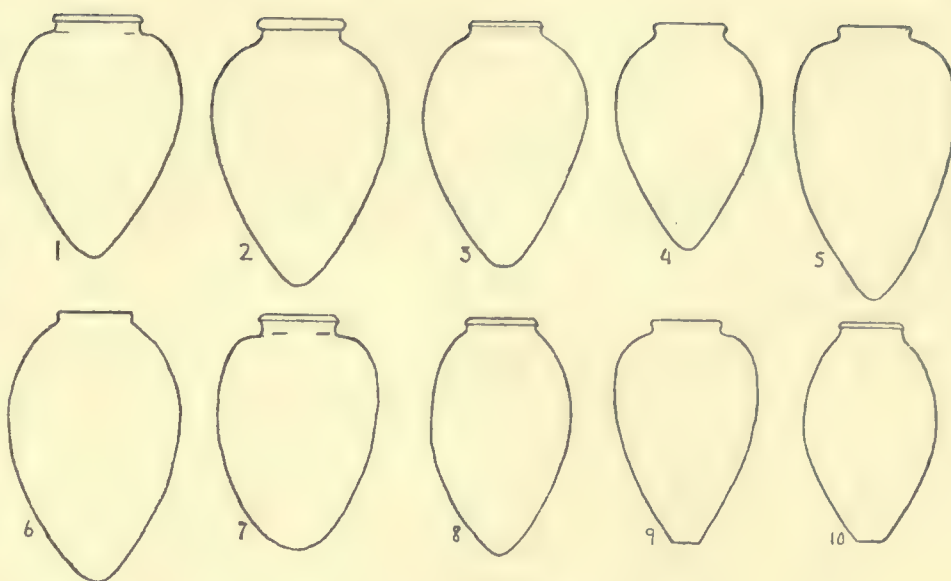
9 = 1581, X; 1525, 23, 24; 3016, 27, 31; \*3012, 1, 2, 6.

10 = 3016, 7–10; \*3017, 1–19; \*3022, 4.

Rough faced, red painted brown or red ware (material b) varying from brown in the soft

<sup>1</sup> It is interesting to note that the European sugar factories use the water jar, called *gerra* or *ballâs*, for transporting cane syrup, from the presses to the refinery.

baked to red in the hard baked ware. The neck has been smoothed by passing the wet finger around horizontally. The base is invariably marked by vertical scratches as if it had been trimmed with a blunt blade perhaps a wooden blade. The same phenomenon occurs in a few examples of the predynastic prototype of type iv found at el-Ahai-wah and is especially

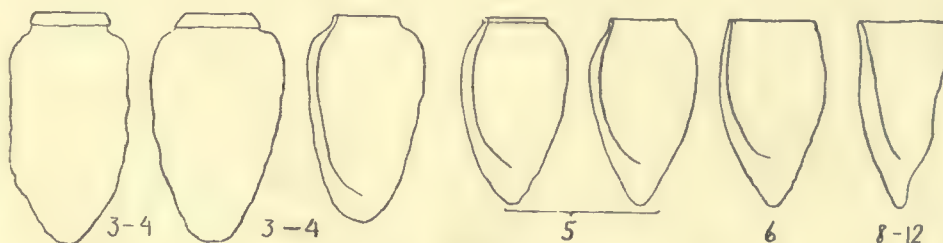


169. Type V, 1 : 10.

common in the tall jars of the 18<sup>th</sup> dynasty. See Petrie *R. T. I*, Pl. 41, 20, 21, 22, 24, 25, 28.

The best examples (1, 2, 3) are, except for these scratches, very similar to type iv. The poorer examples are distinctly different (cf. 5, 6, 8, 9, 10). Both types occur in the same grave. Even better and poorer varieties of type v

occur in the same grave (see 1614, 1615, 1616, all on Pl. 51; 1525, Pl. 54; 1602, Pl. 55; 1605, Pl. 55; 3016, Pl. 73; 3017, Pl. 74). As a rule these jars were



170. Later forms of type V, 1 : 10.

found empty or filled with a mass of dirt indistinguishable from the debris of the tomb; but nine examples, 1602, 4, 5, 1633, 1-4, and 3012, 1, 6, contained a sort of mud plug in the bottom as if mud (for plastering the tomb?) had been brought and scooped out with the hand leaving a remnant<sup>1</sup> (cf. type vi). In any case, the jar is a cheap rough thing suitable only for some temporary use<sup>2</sup> as an offering-pot prescribed by tradition (cf. the use of the round bellied pot of the 8<sup>th</sup>—12<sup>th</sup> dynasties, as an offering-pot used once only). Possibly its use as a mud carrier is only a secondary function, acquired after the loss of its traditional function.

In consideration of the existence of type iv, it seems to me that the prototype of this jar is L 30—33<sup>a-e</sup> (L 33<sup>d</sup> seems to be type v itself).<sup>3</sup> Type v occurs in every type of tomb

<sup>1</sup> Dr. Borchardt found the 5<sup>th</sup> dynasty successor of this jar used for lime-plaster at Abusir, see *Re<sup>2</sup>-Heiligtum*, I, p. 62. It was sometimes used for this purpose also at Gizeh. In the Cheops cemetery, *magurs*, a far more suitable pot, and baskets were used for transporting lime-plaster.

<sup>2</sup> In this connection, it may be recalled that most of these tombs were built at the time of burial, see p. 6 above and note 1.

<sup>3</sup> It may be said, in passing, that L 72, 74, 76, 78 (*Nagada and Ballas*, Pl. 41) form a group of characteristic 4<sup>th</sup>—5<sup>th</sup> dynasty pots which, so far as is recorded in the published material, have never been found in a predynastic burial. So also L 338 (*El-Amrah and Abydos*, Pl. 13) is a characteristic 3<sup>rd</sup> dynasty pot.



and almost in every tomb of both cemeteries (1500 and 3000). This jar, still hand-made, continues in use but degenerates in form during the 3<sup>rd</sup> to 12<sup>th</sup> dynasties (see fig. 170).<sup>1</sup>

This persistence of a pot, which could have had only a temporary use, *still hand made for near 500 years after the invention of the potter's wheel*, shows clearly that this is a *traditional offering-pot* made only for funerary purposes and used but once.<sup>2</sup>

Type VI 1 = 1535, 5; 1608, 1; 1647, 3-5.

2 = \*1622, 10; 1532, 67; \*1586, 6.

3 = \*1581, x (3 pieces).

4 = 1512, 58; still smaller, 1512, 16, 19, 21, 30-33, 59, 61.

5 = 1581, x. For 1621, 6 see type VII.

6 = \*1513, 82.

Rough faced, red painted, brown or red ware like type v. Neck smoothed like type v. But there are no trimming scratches on the base. Otherwise the jar is distinguished from type v by its smaller size and its tapering or even concave body. See Petrie, *R. T. I*, Pl. 41, 21, 22, cf. 43, 130-131.

The cavity is small as if it were almost a dummy jar.

N. 1622, 10 and 1647, 3-5 contained each a mud plug, like certain examples of type v and type VII. N. 1533, 5 contained ashes; but N. 1533 was badly plundered, and ashes were found elsewhere in the grave, especially in 1533, 4 and beside 1533, 7.

The type occurs only in the large tombs of cem. 1500.

The prototype is probably of the hard pink ware, perhaps some form of L 36<sup>b</sup> or L 38. Subsequently the type disappears, perhaps merged with type v, cf. however *el Kab*, XII 21, 22.

Type VII 1 = \*1622, 5, 6; 1621, 6; 1581, x; \*1513, 74.

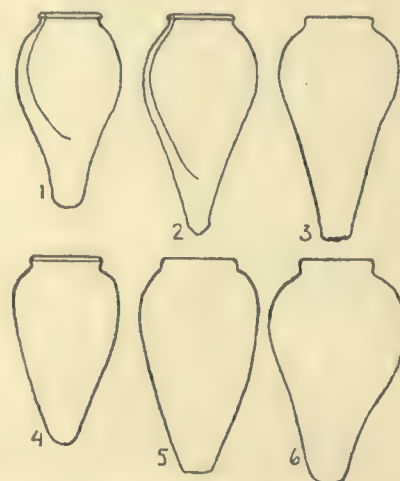
2 = \*1622, 4, 7.

Rough faced, red painted, brown or red ware (material b) like types v and VI. Neck smoothed like v and VI. No trimming scratches. See Petrie, *R. T. I*, Pl. 42, 38-41.

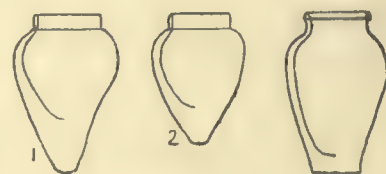
The cavity is small and it is difficult to imagine any practical use for this jar which might not as well have been performed by types v and VI. The jar is rare, only seven examples having been found (4 in 1622; 1 in 1621). Its prototype is probably some of the smaller jars, perhaps L 74, 75. It cannot be traced in our cemeteries beyond these examples (cf. *el-Kab* XII 21).

Type VIII = \*1513, 74, 72, 75 (fig. 172).

Rough faced, red painted, brown ware (material b) like v-VII. See Petrie, *R. T. I*,



171. Type VI, 1: 10.



172. Types VII and VIII, 1: 10.

<sup>1</sup> Petrie, *R. T. I*, Pl. 41, 16-31 and p. 29, mentions *Denderah* xvi, 26 as being the descendent of type v. But he ignores the contemporaneous types given in fig. 170, while *Denderah* xvi, 26 has neither connecting links nor similarity with type v.

<sup>2</sup> At Gizeh these pots were often found in the mouths of untouched pits. They were sometimes found in great deposits in the upper layers of the filling of mastabas, in plundered shafts, or even in offering chambers, apparently cast aside like the round bellied offering pots of the 8-12<sup>th</sup> dynasties. And the possibility must be remembered that these cast away jars would be very convenient for subsequent masons to use for carrying mortar etc.

Pl. 42, 65–107 especially 69–97. There is a late predynastic type which we found at el-Ahaiwah similar enough to this type (something like a small copy of L 34<sup>c</sup>) to be its prototype.

Type IX 1 = 1525, x; 1581, x (2); \*1513, 81; \*1586, 3.

2 = 1525, 25.

3 = 1525, 29.

4 = 1529, 4; \*1513, 84; \*1605, x (3); \*1630, 3.

5 = 3091, 3; \*1586, 4; 3015, 11.

6 = 3051, 1, 2.

Smooth, usually red painted ware varying from soft light brown to hard red. The better examples seem to be of material c, the poorer ones of material b, the line being difficult to draw. N. 3091 was in fact a light greenish white ware, unpainted. These jars were smoothed wet before baking. See Petrie, *R. T. I*, Pl. 42, 53–55.

This jar<sup>1</sup> has a direct prototype in L 53 (cf. especially L 53<sup>f</sup> in *Diospolis Parva*, Pl. 19, L 53<sup>f</sup> was found very frequently at el-Ahaiwah in various sizes; and the same type exactly occurred also with decorations in red paint (cf. D 21, in *Nagada xxxiii*; D 25<sup>a</sup> in *Diospolis Parva* xv). Type ix is made however of only a poor imitation of the hard fine pink or white material of the prototype. This jar does not appear to have had any direct successor; but see *Medum xxxi*, 20 (4<sup>th</sup> dynasty) and the stone forms II–VII.

Type X 1 = 1525, 28, 30.

2 = 1606, 2, 3.

Hard, smooth, fine-grained drab or buff ware (material c). See Petrie, *R. T. I*, Pl. 42, 48. Cf. the predynastic form L 39. We have not been able to trace it in our 3<sup>rd</sup> dynasty cemeteries.

Type XI = 1647, 2.

„ XII a = \*1562, 2.

b = \*3017, x.

c = 1501, 3.

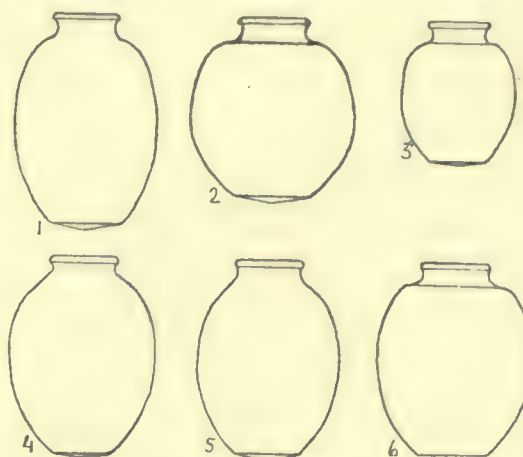
„ XIII a = 1635, 1; \*1586, x; \*3012, 14.

b = 1522, 1.

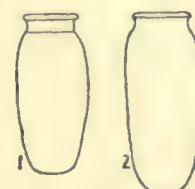
„ XIV a = 1628, 1.

b = 1522, 3 and \*1586, x.

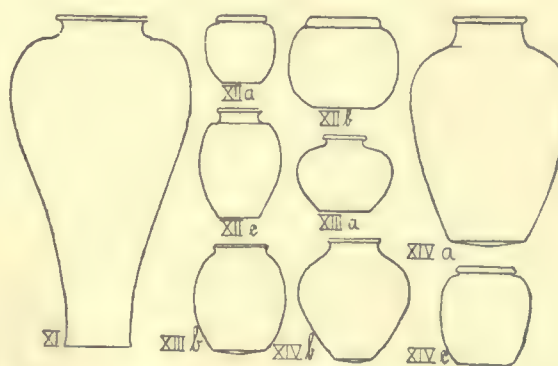
c = 1529, 3 and 3018, 1.



173. Type IX, 1 : 10.



174. Type X.



175. Type XI–XIV, 1 : 10.

Types XI and XII<sup>a–c</sup> are of a dull-polished, fine hard red or drab ware (material c); XIII<sup>a, b</sup> are of dull red-polished brown ware (material b); XIV<sup>a–c</sup> are of hard fine pink or drab ware (material c). For type XI, cf. Petrie, *R. T. I*, Pl. 43, 110–114 and 98, 99; for type XII<sup>a, b</sup>, cf. *R. T. I*, Pl. 42, 83–85; for XII<sup>c</sup>, cf. *same*, 55; for XIII<sup>a</sup>, cf. *same*, 68; for XIII<sup>b</sup>, cf. *same* 57:

<sup>1</sup> Petrie *R. T. I*, Pl. 29 traces this jar to a prototype *Nagada xli*, 94 which appears however to be itself an early dynastic pot belonging to the group of types XII–XIV.



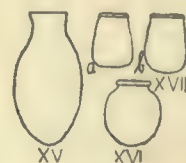
for xiv<sup>a</sup>, cf. *same*, 61; for xiv<sup>b</sup>, cf. *same*, 33, 58—60; for xiv<sup>c</sup>, cf. *same*, 57. These jars are traceable directly to L 52—54 (Petrie) and also to the polished jars P 44—46. Similar forms occur in stone vessels, cf. S 11—x; and it must be noted that the examples of xi—xiv occur in small tombs probably as poorer substitutes, serving the same function as the corresponding stone forms. Similar forms were found in the 3<sup>rd</sup> and 4<sup>th</sup> dynasty graves of cem. 500—700; and similar forms recur in the wheel made pottery of the 4<sup>th</sup>—6<sup>th</sup> dynasties.

Type XV = \*3013, 12.

„ XVI a = \*3017, x.

b = \*1562, 1.

„ XVII = \*1562, 4.



176.

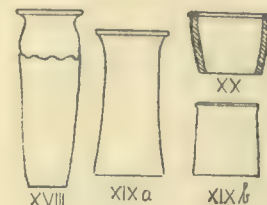
Type xv is of brown ware, stained black apparently accidentally, see Petrie, *R. T. I*, Pl. 42, 49. Types xvi<sup>a</sup>, b and xvii are fine grained pink ware (material c), see *R. T. I*, Pl. 42, 51, 52 and 50. These types have all of them direct predynastic prototypes: for xv, cf. R 91—92; for xvi, cf. R 62—63; for xvii, cf. R 65 and L 42.

Type XVIII = 1602, 1.

„ XIX a = 1521, 1.

b = \*3031, 10.

„ XX = \*3013, 5.



177.

Types xviii and xix<sup>a</sup> are of red ware (material c of a poor sort). Type xix<sup>b</sup> is of brown ware, with a dull black polish. Type xx is of brown ware. For type xix<sup>a</sup>, cf. Petrie, *R. T.* 43, 124. All these have direct predynastic prototypes: xviii is practically W 61 (*Nagada*, Pl. 32); xix<sup>a</sup> is W 90; xix<sup>b</sup> is W 71<sup>b</sup>; xx is like a piece found at el-Ahaiwah but with a bottom of a separate piece. These types all seem to cease with this period.

Type XXI a 1 = 1532, 50.

a 2 = 1532, 31, 32, 51; 1621, 4;

\*1515, 16.

a 3 = 1532, 58.

a 4 = 1532, 6; 1533, 7; 1512, 46.

XXI b 1 = \*1513, 12.

b 2 = 3016, 35; \*1514, 47, 49.

b 3 = \*1513, 87.

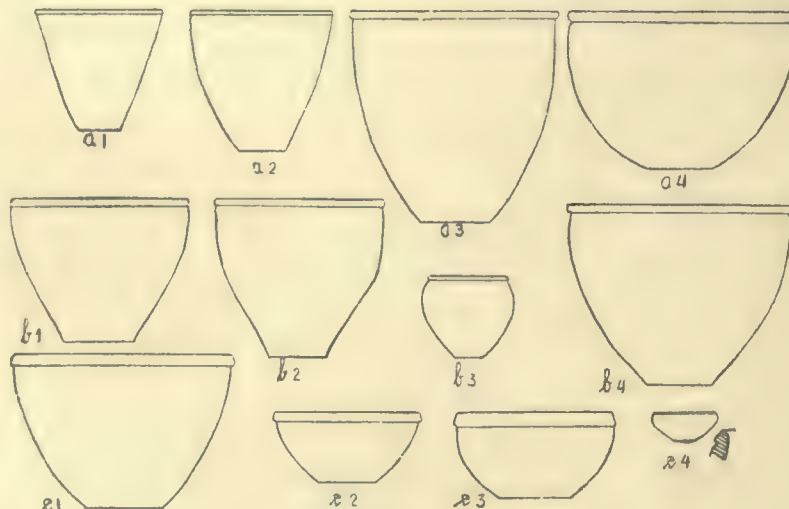
b 4 = 1533, 4.

XXI c 1 = 3011, 1.

c 2 = \*3017, 50; \*3023, x.

c 3 = 3071, 8.

c 4 = \*1622, 2.



178. Type XXI, 1 : 10.

Types xxi<sup>a</sup>, 1—4 are of red painted, hard red ware: xxi<sup>b</sup>, 1—4 and c, 1—3 are of red polished brown ware (cf. *I Abydos* XL, 41, XXXVII, 1, 2, 5, 6). xxi<sup>c</sup>, 4 is of red painted ware. The c-forms are further distinguished by the form of the rim.

These jars sometimes contain bones of offering animals (1532, 58; 3011, 1 [human?]; 3017, 50); and such bones were also found near overturned jars of this type (1532, 58; 1514, 47, 49). Ashes were found in 1533, 4 and beside 1533, 7; and 1533, 7 and 1513, 87 were fire stained.

The predynastic prototype is R 42, 63; L 9, 9<sup>b</sup>; and P 10 (?). The type is not found in our third dynasty cemeteries. It is copied in stone, see 1571, Pl. 49<sup>a</sup>, type S xiv.

Type XXII = 1532, 11.

Smooth hard red ware. This type is practically xx1 with an open spout added. There is no direct prototype except the prototype of xx1. A very similar stone form occurs in cem. 500, third dynasty.

Type XXIII = 1532, 34.

Red painted, pebble polished brown ware. This is practically the same as a large form of xxiv with an open spout added. Otherwise it has no prototype.

Type XXIV a 1 = 1512, 27; 1532, 26—30, 68; 1506, 4; 1501, 5; 1634, 1; \*1622, 1.

a 2 = 1532, 17—19, 21—24, 35—38; 1525, x; \*1515, 16; \*1586, 8; 1529, x; 3016, 26, 23 (pol. all over); \*3017, 45; 3061, x (no pol.); \*3031, 33; \*3013, 3 (no pol.).

XXIV b 1 = 1636, 1; 1522, 2 (dep.); 1602, 3; 1621, 5; 3016, 22; \*3053, 2 (circular dep., no pol.).

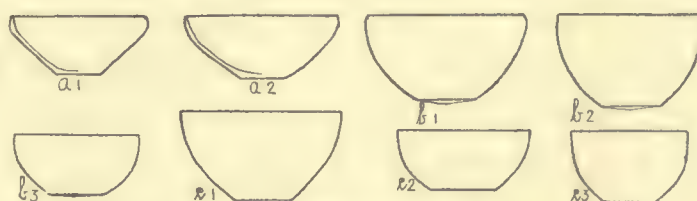
b 2 = 1525, 21, x; 1512, 28, 29; 1647, 1.

b 3 = 1532, 5, 8, 9; 3001, 10; \*3022, 1; \*3023, 2 (no pol.); \*3015, 5.

XXIV c 1 = 1532, 20.

c 2 = 1532, 56.

c 3 = 1512, 54; \*3022, 5.



181. Type XXIV, 1:10.

Red or brown ware (material b), usually soft-baked brown, red painted, pebble polished on inside and on outside of rim (3016, 23 is polished all over). In the better forms of a 1—2, the polishing lines are vertical (i. e. radiating from bottom) inside, see Pl. 53<sup>a</sup>, 5—9, like the predynastic bowls, or both vertical and horizontal (thus producing an unbroken polish, see Pl. 53<sup>a</sup>, 10). In other cases, the lines are vertical on one side, horizontal on another, see Pl. 53<sup>a</sup>, 11, 14, 15. In all these forms, the lines are horizontal on the outside of the rim and sometimes on the inside of rim also. The b-forms usually have horizontal lines (i. e. around the bowl) inside and out, see Pl. 54<sup>a</sup>, 21. The c-forms usually have vertical lines like the a forms, see Pl. 53<sup>a</sup>, 4.

The direct predynastic prototype of this type is L 12—19 (P 23—28). These, and the types xxv and xxvi, are the bowls which seem to have given rise to the forms of the stone bowls. A few examples of type xxiv<sup>c</sup> were found in the tombs of the third dynasty in cem. 500—700. But the wheel-turned bowls of the 4<sup>th</sup>—6<sup>th</sup> dynasty usually have recurved edges, copying the stone forms of the 3<sup>rd</sup> dynasty.

Type XXV = \*1513, 92, 67; 1602, 2; 1617, x; 3016, 33; 3011, 2.

This is in all particulars a ware like xxiv. In fact it is merely a variety of xxiv forming a connecting link between xxiv and xxvi. Cf. the predynastic forms L 12<sup>b,c</sup> (P 25). This form also is copied in stone, see type S xxv.



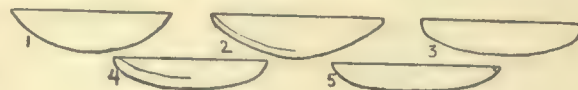
182. Type XXV.



Type XXVI 1 = \*3061, ; 2 = 1532, 39; 3 = 1512, 2; 4 = 1532, 41; 5 = 1513, 91.

These are all shallower or deeper, thicker or thinner varieties of the same pan, varying in height from 4 to 6 cm and in diam. from 20–36 cm.

The examples found were: 1532, 10, 39–49, 52–55, 66; 1512, 2–9, 11, 18, 22, 25, 45, 51–53, 55, 62; 1621, 1–3, (3 examples, one no pol.); \*1571, 16, 17, 22; \*1515, 9, 10; \*1513, 68, 69, 91 (a stack of 6 pans); \*1586, 7; \*1630, 5; 3001, 9, 10; 3011, 6, 7, 13; \*3013, 4; \*3014, 2; \*3015, 3, 4; 3016, 24, 33, 39 (pol. all over); \*3017, 46, 48; \*3022, 2, 10; \*3023, 5, X; 3024, 2; \*3031, 32; 3052, 6, 11; \*3053, 1; 3061, X; 3071, X.



183. Type XXVI, 1 : 10.

This ware is red painted, brown or red ware (material b, usually brown), pebble polished. The lines run across the face from side to side and around the outer side of the rim. This plate has no direct prototype, and later occurs only in the earliest of the stone-roofed graves of cem. 500–700. It is as seen above one of the most common types found, second only to type v, and one of the most characteristic pieces of the 1<sup>st</sup> to 2<sup>nd</sup> dynasty graves, usually found in stacks of 3–9 pans. The form occurs also in stone, type S xxvi.

Type XXVII. Rough faced, hard red ware (material b), red painted. A single example occurs, N.1533, 2.



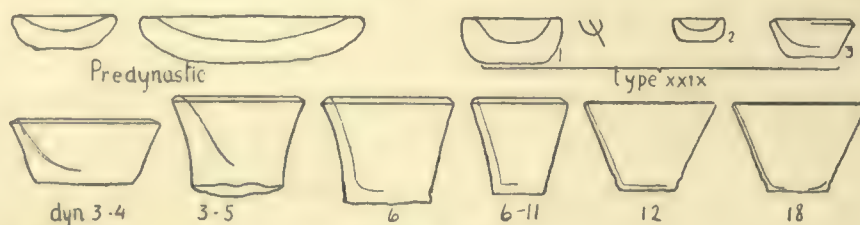
184. Type XXVII.

Type XXVIII. Rough faced, hard red ware (material b), red painted. Two of these ring stands were found: 1 = 1512, 47; 2 = 1533, 6. The prototype is to be found probably in the offering tables L 86. The ring stand continued to be made down to the New Empire.



185. Type XXVIII.

Type XXIX. Slightly baked mud ware: 1 = 1616, 1 (with pot marks on inside); 1636a; 2 = 1525, X; 3 = 1628, 2; \*1515, X. See Petrie, R. T. I, Pl. 43, 145–151 where forms occur more nearly like both the predynastic and the later forms. See also Petrie's explanation of the mode of manufacture by laying a lump of mud in a hole in the ground and trimming it by hand. The forms with flat bottoms were of course made *on* the ground. I believe that these were used for baking bread (*tj*-bread)<sup>1</sup>.



186. Type XXIX, 1 : 10.

The forms marked "predynastic" were found at El-Ahaywah in numbers: the forms of the 3–4 (dynasties) were found at Gizeh Wady; 3–5 (dynasties) were found at Naga-ed-Dêr; 6 (dynasty), 6–11 (dynasties) and 12 (dynasty) were found at Naga-ed-Dêr; 18 (dynasty) was found at Dêr-el-Ballas. It is only to be expected that an extremely cheap and temporary piece, serving undoubtedly some old traditional purpose (as a carrier of *tj*-bread) would continue to be found as a hand-made pot long after the invention of the wheel.

<sup>1</sup> Cf. the form of the *tj*-bread above the offering tables on the seal cylinders, Pl. 43, 44 and on the 4<sup>th</sup> dynasty stela of Wep-em Nofret, son of Cheops, and others, where the base of the *tj*-bread is shaped like 3–4 in fig. 186.

The forms of the 12<sup>th</sup> and 18<sup>th</sup> dynasties are finally however made on the wheel; but the fingers were still screwed into the wet base giving nearly the appearance of a hand-made pot, and in the 18<sup>th</sup> form, the thumb or a finger was thrust through the bottom.

## XI. STONE VESSELS.

ONE of the most striking characteristics of the first and second dynasties is the abundance and variety of the stone vessels found in the tombs, especially in the stairway tombs. The following table gives a comparison of the numbers and forms of stone and pottery vessels in the less disturbed tombs of both cemeteries.

Under tomb type, it may be remembered that *A* means *wood-roof*, *B* means *corbel-roof*; *1* means *chamber entered from above*, *2* means *chamber with entrance on side or end*; *a* means *single chamber*, *b* means *more than one chamber*. Under kinds of stone,

a. = alabaster	m. = marble
s. = slate	bl. = black
v. = volcanic ash	y. = yellow
b. = breccia	p. = pink
l. = limestone	

The upper part of the table gives the large tombs; the lower part, the small tombs.

<i>Tomb</i>	<i>Type</i>	<i>Preservation</i>	<i>Number Vessels</i>	<i>Number Forms</i>	<i>Kinds of Stone</i>
N. 1532	A 1 b	Anciently plundered	4 stone vessels 71 pottery "	2 forms 12 "	a. 1 : v. 2 : bl. l. 1.
N. 1512	A 2 b	Anciently plundered	18 stone vessels 40 pottery "	3 forms 7 "	a. 7 : s. 6 : v. 3 : l. 2.
N. 3016	A 1 b (small)	Undisturbed	20 stone vessels 18 pottery "	10 forms 5 "	a. 16 : s. 3 : l. 1.
N. 1514	B 2 b	Anciently plundered	28 stone vessels 19 pottery "	8 forms 3 "	a. 11 : s. 11 : v. 3 : v. b. 2 : m. 1.
N. 1513	B 2 b	Anciently plundered	55 stone vessels 56 pottery "	13 forms 10 "	a. 41 : s. 5 : v. 5 : l. 3 : p. l. 1.
N. 3017	B 2 b	Anciently plundered	33 stone vessels 29 pottery "	11 forms 6 "	a. 20 : s. 1 : v. 2 : l. 8 : y. l. 1 : b. 1.
N. 3031	B 2 b	Ancient plundering	18 stone vessels 3 pottery "	9 forms 3 "	a. 14 : s. 1 : v. 3. (pottery probably thrown out by plunderers).



<i>Tomb</i>	<i>Type</i>	<i>Preservation</i>	<i>Number Vessels</i>	<i>Number Forms</i>	<i>Kinds of Stone</i>
N. 3013	B 2 b	Ancient and modern (?) plundering	5 stone vessels 9 pottery "	4 forms 4 "	a. 2 : v. 2 : black stone 1.
<i>Small tombs.</i>					
N. 1647	A 1 a	Undisturbed	0 stone vessels 5 pottery "	— 3 forms	—
N. 1525	A 1 a	Undisturbed?	1 stone vessel 9 pottery vessels	1 form 5 forms	y. l. 1.
N. 3011	A 1 a	Anciently plundered	4 stone vessels 8 pottery "	3 forms 4 "	a. 2 : l. 1 : m. 1.
N. 3052	A 1 a	Anciently plundered	4 stone vessels 6 pottery "	3 forms 2 "	a. 3 : s. 1.
N. 3023	B 2 a	Anciently plundered	1 stone vessel 8 pottery vessels	1 form 5 forms	including fragment in debris.
N. 3012	B 2 a	Intact	2 stone vessels 4 pottery "	2 forms 2 "	a. 1 : s. 1.
N. 3053	B 2 a	Anciently plundered	7 stone vessels 7 pottery "	4 forms 3 "	a. 6 : s. 1.
N. 3015	B 2 a	Undisturbed?	5 stone vessels 9 pottery "	4 forms 4 "	a. 4 : v. 1.
N. 3022	B 2 a	Intact	3 stone vessels 7 pottery "	3 forms 4 "	a. 2 : l. 1.
N. 3014	B 2 a	Intact	0 stone vessels 3 pottery "	— 3 forms	—
N. 3001	? a	Anciently plundered	5 stone vessels 6 pottery "	5 forms 3 "	a. 3 : l. 2.

*Kinds of  
stone*

It is unsafe to draw conclusions from the proportion of pottery and stone vessels in small tombs because their contents are naturally limited by the limited resources of the relatives. But the great increase in stone vessels in the stairway corbels is certainly significant. It is also noteworthy that the proportion of alabaster vessels largely increases from N. 1513 on; and it may be mentioned in this connection that the materials of the stone vessels in the third dynasty cemeteries are alabaster, limestone, diorite, and brecchia, of which alabaster is the material most frequently used.

The stone vessels, with the exception of some dummy forms of type S I<sup>c</sup> and III<sup>a</sup>, appear to have been bored with the stone borer, after being more or less perfectly formed on the outside. The borer seems to have been the usual blunt oblong stone held in the fork of a cleft stick. The stick seems to have been turned by a crank fastened to the upper end, while the stick, weighted with stones in nets, was held in the other hand.<sup>1</sup> Different sized stones seem to have been used in succession in almost all except type S I (see fig. 197). The dummy forms were possibly bored by hand.

After being bored the vessels were finished off by rubbing with a smooth pebble<sup>2</sup> outside in all cases and in many cases inside as well. The depression or ring in the bottom of the bowls seems to have been made separately in finishing, see p. 108. In the process, the instrument used, was in three cases driven down through the bottom of a bowl and a false bottom fixed in with cement (1512, 63; 1514, 13; 3031, 4).

### Types of Stone Vessels.

Type I a 1 = 1532, 3; 1571, X.

a 2 = 1513, 66, 62; 1572, 1; 1605, 11 (basalt).

a 3 = 1571, X; 1605, 24 (hard black stone).

a 4 = 1513, 17.

a 5 = 1512, 66; 1513, 39.

a 6 = 1513, 40; 1586, X; 1612, X.

a 7 = 1513, 16; 1882, 4.

a 8 = 1513, 52.

a 9 = 1513, 15; 3023, 1.

a 10 = 1513, 59.

a 11 = 3001, 8.

a 12 = 3016, 2 b.

a 13 = 3016, 3.

a 14 = 3031, 9 (volcanic ash).

a 15 = 3031, 15.

a 16 = 3011, 10.

a 17 = 3016, 10.

I b 1 = 3016, 4.

b 2 = 3016, 12.

b 3 = 1581, 1.

b 4 = 1581, 2.

b 5 = 1513, 23; 3052, 9.

b 6 = 1513, 55.

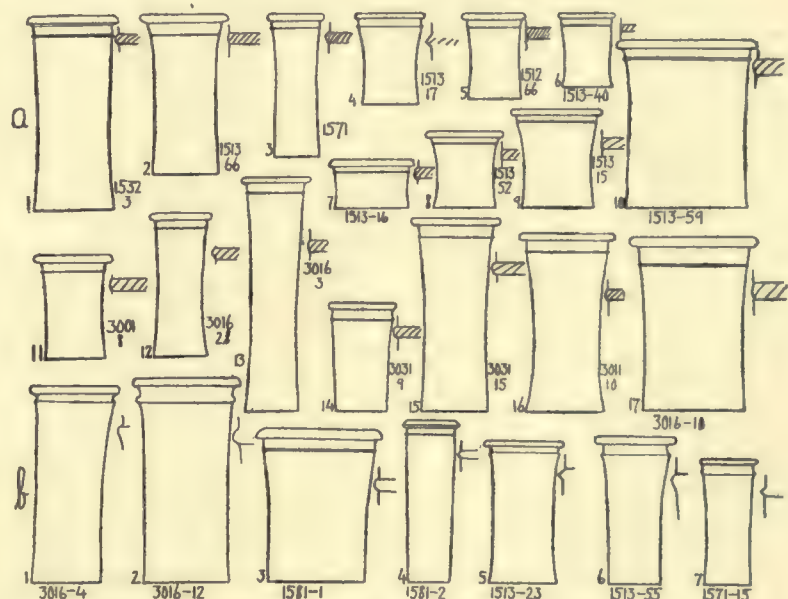
b 7 = 1571, 15; 1572, X.

I c 1 = 1513, 56.

c 2 = 1513, 43.

c 3 = 1513, 63; 3053, 10; 3071, 29.

c 4 = 1513, 27; 1514, 29; 1582, X; 3015, 1.



187. Type I a, b, 1:10.

<sup>1</sup> See BORCHARDT A. Z. xxxv (1897) p. 107; QUIBELL II. Hierakonpolis p. 49 LXII 5; and GREEN, l. c. p. 17 § 44 (vase grinder's workshop).

<sup>2</sup> QUIBELL's suggestion that the outside of the stone vessels was formed by rotating the vessel with sand in a hollow made in hard mud is plausible; but no traces of such treatment is visible on any stone vessel I have seen.



Type c 5 = 1513, 37.

c 6 = 1513, 57.

c 7 = 1571, x.

c 8 = 1572, 2.

c 9 = 1523, 1.

c 10 = 3017, 30; 1571, 1.

c 11 = 3031, 16.

c 12 = 3051, 3.

c 13 = 3012, 4.

c 14 = 3001, 4.

c 15 = 3053, 8.

c 16 = 3017, 27.

c 17 = 3017, 21; 1605, 9; 3015, 2.

c 18 = 3016, 2.

I d 1 = 1513, 61.

d 2 = 1513, 60.

d 3 = 3016, 5.

d 4 = 1571, x.

d 5 = 3017, 20.

d 6 = 3017, 56.

d 7 = 1525, 3.

I e 1 = 3017, 55.

e 2 = 3001, 3.

e 3 = 3053, 9.

e 4 = 3031, 2.

e 5 = 3031, 1;

3017, 29.

e 6 = 3003, 3.

e 7 = 3002, 1.

I f 1 = 1882, 1.

I g 1 = 1581, x.

I h 1 = 1515, 13.

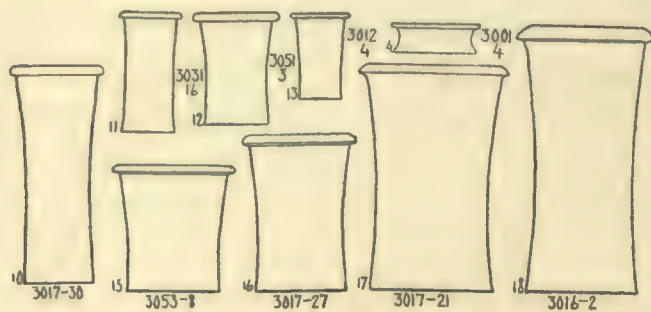
h 2 = 3091, 2.

h 3 = 1584, 6 (v.).

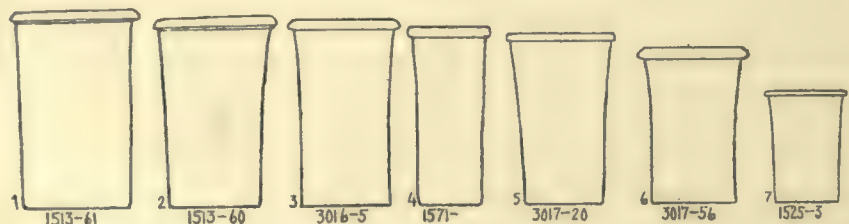
h 4 = 1584, 7.



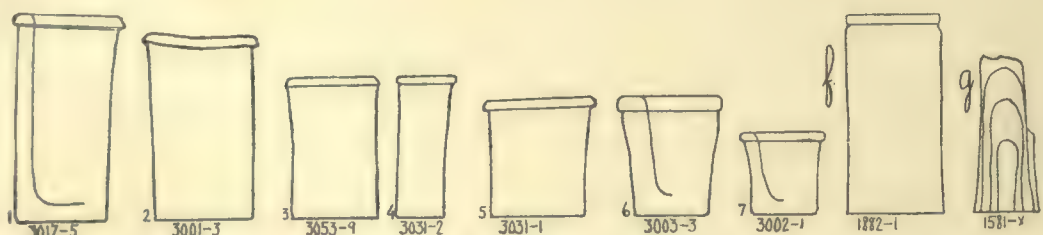
188. Type Ic, 1:10.



189. Type Ic, 1:10.



190. Type Id, 1:10.



191. Type Ie, f, g, 1:10.



192. Type Ih, 1:10.

These vessels are with four exceptions all of alabaster; but 1605, 11 (a. 2) is of black basalt (?), 3001, 9 (a. 14) is of volcanic ash, 1605, 24 (a. 3) is of hard black stone, 1584, 6 (h. 3) is of volcanic ash.

Almost all of them, after being bored, have been smoothed inside and out by rubbing, leaving a finely scratched surface. The poor jars, e 1—7, are carelessly bored, some of them possibly not with a shaft-borer, with thick walls and are not dressed inside.

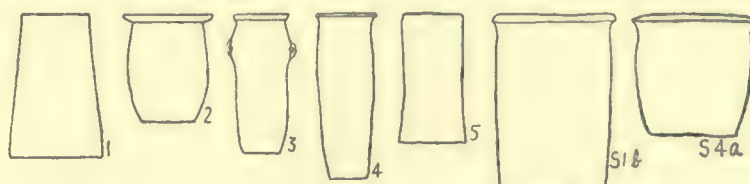
It is noteworthy that the wood-roofed tombs have only the better *a*-forms and all the poor *e*-forms are in cem. 3000. The form *f* is essentially a later form which occurs in

5<sup>th</sup>—6<sup>th</sup> dynasty tombs in cem. 100. The curving lines on *g* are incised. The group *h* is a group of miniature jars, of which 2 is certainly from a child's grave, 3 and 4 are possibly from a child's grave and 1 is certainly not from a child's grave.

This jar is connected in a manner not yet quite certain with the development of the wavy-handled pot which Petrie used as the basis of his sequence dating. In the predynastic period contemporaneous with the *earlier* wavy-handled forms, a series of comparatively small cylindrical stone jars *without cord* have been found, occurring in a few isolated examples in nearly every cemetery, see Fig. 193 where 1—3

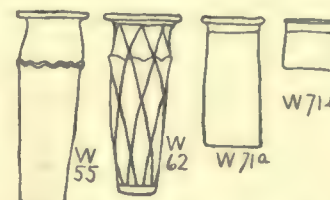
Origin  
and date  
of type  
*S 1.*

are from Naga-ed-Dêr, 4—5 from el Amrah<sup>1</sup> (Pl. 16, 1, 4) and *S 1<sup>b</sup>*, *S 4<sup>a</sup>* from Negadah. These stone forms are earlier than the *late* wavy-handled pottery forms *W 55—63*, see Fig. 194 (*Naqadah*, Pl. 32).



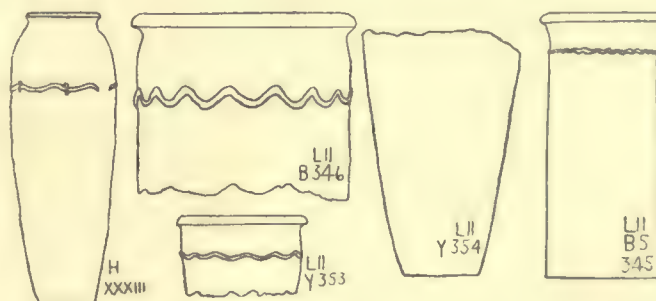
193. Predynastic stone vessels, 1:6.

These late forms *W 55—63* occur in the same graves with the fine white cylindrical jar, *W 71—80*, Fig. 194 (in *M. 16*, 1 Abydos XL; in *El-Ahaiwah*, A. 23, 25, 45, 88, 120, 165); and in general *W 71* is as early as *W 55—63* but continues in use longer. Thus the cylindrical pottery jars *W 71—80* seem to be copied from the early stone jars and then confused perhaps with *W 55—62* which were on their side descended



194. Late Predynastic pottery vessels, 1:12.

from the wavy-handled pots. Both of these types begin in the late predynastic period earlier than the known examples of stone cylindrical jars *with cord*. In all the recorded predynastic cemeteries there are only three examples of stone cylindrical jars with cord about the neck which can by any possibility be dated previous to Menes, — *Naqadah* 1401, basalt jar *S 1<sup>c</sup>* (with cord?) recorded by Mr. PRICE, grave of the late middle predynastic; *Naqadah* 1248, alabaster jar *S 1<sup>c</sup>*, possibly slightly pre-Menic; *Naqadah*, B 100, alabaster jar *S 1<sup>c</sup>*, possibly slightly pre-Menic. In view of the doubtful record in the case of Naqada 1401 and the unanimity of the material in all our cemeteries, it is clear that *cylindrical jars with cord* were copies of *W 71* and came into use about the time of Menes.



195. Early dynastic stone vessels, 1:6.

About the time of Menes, we have recorded copies in stone of the pottery forms *W 55—63* and *71—80*, see Fig. 195, stone vessels from Hierakonpolis and Abydos and see Fig. 187 above. The stone copies of *W 55—63* are rare and have not been found after the first dynasty. The stone copies of *W 71* with cord occur in Petrie's Abydos Cemeteries *M* (*I Abydos* XLII—XLII) and *B* (*II R. T.* LII), in the Menes tomb at Naqadah (*II Origines* Fig. 629—654), and in considerable numbers in the royal tombs at Abydos, see *II R. T.* XLVII—LIII. They become the most common form in the second dynasty, see above. In the third dynasty the type is still numerous. The better forms have the cord; the poorer ones have none. See Cem. N. 3500, N. 500; *Naqadah*, § 8—12

Develop-  
ment of  
type *S 1*  
in the  
first four  
dynasties.

<sup>1</sup> El Amrah p. 19 tomb a 16 jar *S 4<sup>c</sup>*, late middle predynastic; p. 19 tomb a 95 jar *S 1<sup>b</sup>* (without cord), late middle predynastic.



stairway tombs; *el-Kab* p. 4—9, Pl. 10, 45—48, stairway and shaft tombs<sup>1</sup>; *Mahasna* XIII, XXII, XXVII stairway tombs. At Gizeh we have found several pieces in the Cheops mastabas of the early fourth dynasty but without cord; see also *Medum*, Pl. 13 and our Cheops stelae where this jar is represented holding various kinds of oil.

Later  
forms of  
type S 1.

In the fifth dynasty, there is a slender cylindrical jar bearing the name of *R<sup>c</sup>-n-wsr* found at Abydos (*II Abydos* XIV) and forming a transition form to the well-known Pepy-jars of the sixth dynasty. The slenderness of the form of most of the Pepy jars is probably due to the invention of the tube borer. As early as the fourth dynasty, evidence has been found of the use of a borer consisting of a hollow tube of metal (copper?), see Petrie *Pyramids* Pl. 14. This tube was bored down into a block of stone by turning it, making a cylindrical hole and a slightly conical core both showing fine horizontal striations. The core was broken off and the bottom smoothed by hand. Tubes of narrow diameter were more practical and easier to make and the cylindrical jars became correspondingly slender. The base was then enlarged to a disc-like foot to give the jar stability. Variations of these Pepy-jars still used as carriers of oils and ointments have been found in every 6<sup>th</sup>—12<sup>th</sup> dynasty cemetery. Those forms which have no disc-like foot were probably intended for toilet boxes in which they were kept upright by being placed in a hole in a board, as in the well known examples in the museums. In the 18<sup>th</sup>, however, no recognizable descendant has been found except in foundation deposits; and the function must have been taken over by some other stone vessel, — possibly by the alabaster cup with foot. The occurrence of cylindrical jars in foundation deposits in the 18<sup>th</sup>, inscribed in the manner of the Pepy jars is no doubt due to tradition. These 18<sup>th</sup> jars were in part copied from jars found in foundation deposits during the rebuilding of older temples, and in part, they were reused older jars, see BORCHARDT, A. Z. XXXVII 1899 p. 143.

Thus the history of this jar as we have traced it, associated always with the same function reaches from the early middle predynastic period through the new empire.

Type II = 1513, 35.

III a 1 = 1535, 2.

a 2 = 1513, 19.

a 3 = 1523, 2; 1529, 3.

a 4 = 1513, 53.

a 5 = 3061, 1; 1562, 1.

III b 1 = 1607, 1 (rim a separate piece).

b 2 = 3031, 3.

b 3 = 3016, 2.

b 4 = 3054, 2; 1533, 1.

b 5 = 1513, 23.

b 6 = 1513, 56.

b 7 = 3016, 6.

Type III b 8 = 3024, 3.

IV 1 = 3150, 2 (2 pieces).

2 = 1525, 1.

V 1 = 3016, 11.

2 = 1572, X.

3 = 3025, 2.

4 = 1571, 25.

VI 1 = 3015, 5.

VII 1 = 1513, 28.

2 = 1513, 58.

3 = 3031, 11.

4 = 3031, 17.

<sup>1</sup> GARSTANG's effort in *Third Egyptian Dynasty* p. 41 to date the tombs el-Kab 264 etc. to the second or third dynasty has absolutely no basis. The pottery, the type of tomb, the position of the burial, all show at a glance that Quibell has correctly dated these tombs to the 12<sup>th</sup> dynasty.

Type VII 5 = 1514, 27.  
6 = 3017, 38.  
7 = 1571, 26 (two pieces).

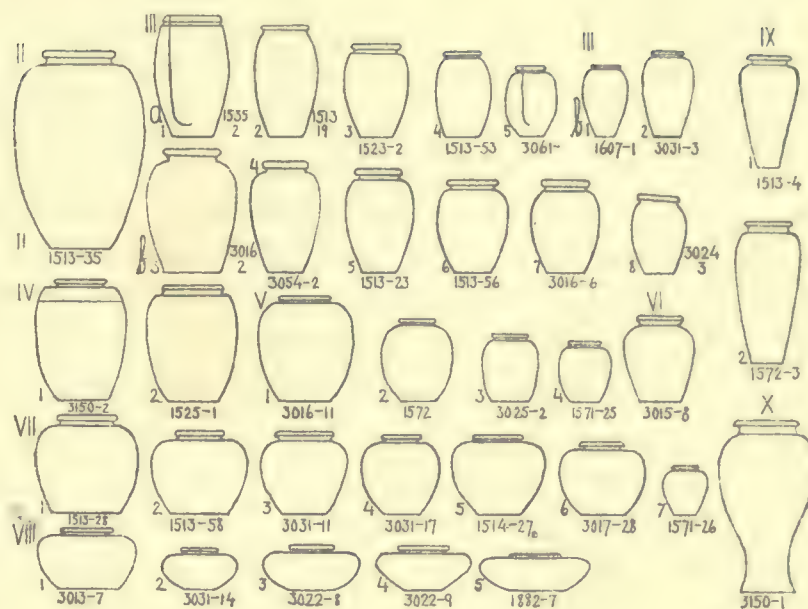
Type VIII 1 = 3013, 7.  
2 = 3031, 14.  
3 = 3022, 8; 1628, 3.  
4 = 3022, 9.  
5 = 1882, 7.

Type IX 1 = 1513, 4.  
2 = 1572, 3.

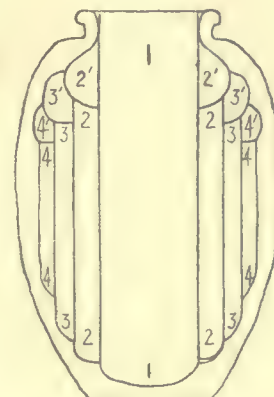
Type X 1 = 3150, 1.

These forms are of alabaster of varying quality. The most of them, especially the more carelessly made (cf. IIIa 5), are of coarse opaque alabaster. Some of the better forms, II, III b 2, VI 1, and X have a dull polish; the rest are smoothed by rubbing, presenting a finely scratched surface. Most of the pieces are bored and smoothed inside, to a surface nearly parallel to the outside surface; but some pieces (IIIa mostly) have a straight vertical hole made by boring with a single stone (or stick?) and left rough. Apparently all pieces were begun in the same way. The smaller jars were then probably finished by hand (i. e. with a small stone held in the hand). The larger jars appear to have been bored by successively larger stones for which room was first made by hand at the top of the previous hole (see Fig. 187, where it is assumed, hole 1 was first bored with a stone borer, then the cavity 2' by hand, hole 2 with a borer then cavity 3' and hole 3, cavity 4' and hole 4, alternately by hand, and with the borer leaving circular ridges inside which were often rubbed away by hand).

Type II—VII, IX. Of all the examples of types II—VII, IX here recorded, only five can be previous to the second dynasty,—III b 1 = 1607, 1; III b 3 = 3016, 2; III b 4 = 1533, 1; IV 2 = 1525, 1; V 1 = 3016, 11. At el-Amrah there are three pieces which may be late first or early second dynasty, = b 33, b 140, b 55, all of type III. In Petrie's cem. B and M at Abydos (early first dynasty) only three similar jars without handles were found, *I Abydos* XLVII, LI<sup>e</sup> 278, 283. The bottle-shaped jars, *II Origines* Fig. 625—627, 667, from the Menes tomb do not represent exactly the types II—VII, IX. In the tombs subsequent to Menes, however, a number of examples occur, see *II R. T.* extra plates, stone vessels nos. 123, 124, 281, 282, 284, 285, 329, 330, 333, 334. We get in the predynastic period the same form as type III *but with handles*, in both stone and pottery, *Naqada* H 25—45 and D 8—17, see type XI. The list above shows the frequency of these types in the second dynasty; and is supported by the stone vessels from the tomb of Khasekhemui (*I Abydos* IX 5—12). See *el-Amrah* VII 3 (tomb 54), 5 (tomb b 10) and tombs b 33, b 145, b 140, b 55. They occur also in the stone roofed graves in



196. Types II—X, 1 : 10.



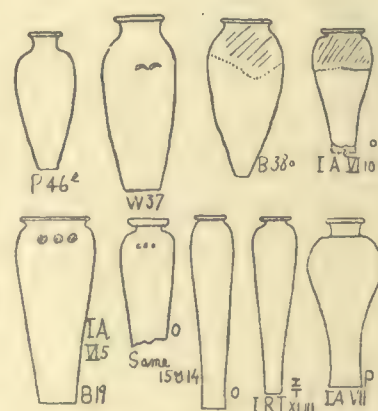
197. Stone boring, 1 : 5.



cem. N. 500 and N. 3500 and at el Kab (p. 6 no. 191 and no. 88; Pl. xxvii 101, 136, 166, 170, 178). They are found in the stairway tombs at Naga-ed-Dêr (N. 587) and other sites of the same period, — see *Naqada* xi 17—25 (stated on p. 36 to be from Ballas but not mentioned in the description of tombs), *Mahasna* xxvii 9, 10 (from K 4) and *Reqaqnah* vii, ix 23, xi 34—36 (from R 40 and R 1). See also the large jar of Kha(?)—sekhem(?)<sup>1</sup> = Besh, *Hierakonpolis* xxxvii 1, type II. Type IV is the same in form as pottery type XII. Variations of these forms continued to be made practically in all succeeding periods, but never again in such numbers.

Type VIII is almost a characteristic second dynasty form. It was not found at Abydos earlier than the tomb of Qa (*K'j'c*, *II R. T.* LIe) and occurs in the tomb of Khasekhemui (*II R. T.* IX). In our cemeteries it is found only in the corbel vaults of cem. 3000 and in N. 4573, N. 4900, N. 573 (stairway), N. 559 (stone roof), N. 519, 537, 543, 627, 691, 692. See *el Amrah* b 55, b 142, b 12, b 70; *el Kab* Pl. 2 and § 13, Pl. 10 13, 16; *Naqada* xi 26—33 (26 alone is mentioned in the description of tombs Q 162, Q 260 and Q 275, all stairway tombs); *Reqaqnah* vii from R 40 early stairway. In the later K stairway tombs at Mahasna no example of this type was found.<sup>2</sup> There are a few copies of type VIII in pottery, — N. 4175. After the stairway tomb period, type VIII has, I believe, never been found.

Type X is a very rare form. Besides the piece in Fig. 196, one was found by MACE in cem. 3500. *Naqada* xvi 165 presents a similar form marked Egyptian, but apparently not mentioned in the text (i. e. not to be dated from the published material). This type is no doubt a copy of the similar pottery type XI which has three possible prototypes, *Naqada* B 38 a, P 46 c, W 37, see Fig. 198. The early dynastic pottery forms in Fig. 198, taken from *I Abydos* vi and vii and *I R. T.* XLII, show the relations to these prototypes. The pottery type developed into the well known forms of the fifth to sixth dynasty and was again copied in stone and in bronze in that period.



198. Pottery prototypes of S type X, 1 : 12.

Type XI = 3025, 1 (alabaster).

" XII = 3013, 15 (black stone).

" XIII = 1571, 23 (volcanic ash, in two pieces with strips of slate fastened on with pink cement. Corresponding marks were made on the edges of the upper and lower halves, after they had been fitted together so as to preserve the relation until cemented.




199. Types XI—XIII, 1 : 10.

Of these three jars, types XII and XIII are fancy forms probably used for ointment or cosmetic. Type XII has handles and is decorated with a cord pattern, cf. *II R. T.* vi 27 (*Dr*).

Type XI is a regular predynastic type, cf. *Naqada*, viii 42—55. See *I Abydos* XLV 6 (tomb M 16) and xxvii (four pieces from the Osiris temenos).

Type XIV = 1571, 27 (soft black stone) (cf. pot. type XXI a<sup>1</sup>).

" XV 1 = 1571, 26 (volc. ash), 25 (black limestone).

<sup>1</sup> Mace suggests the reading  and the identification with the Zoser-teti of the lists.

<sup>2</sup> *Mahasna* xxvii 5 is not identical with type VIII.

- Type XV 2 = 1513, 32 (alabaster) (cf. pottery type XXI c 4).  
 3 = 3017, 41 (calc. alabaster).  
 4 = 1513, 30 (white limestone).

Type XVI = 1513, x (volc. ash).



200. Types XIV—XVI, 1 : 10.

Type XIV is rare and was probably copied from the more numerous pottery vases of the same form, type XXI a 1. The only other example known to me is from the Osiris temenos, *I Abydos* xxvii, 2<sup>1</sup>. The pottery type occurs in both first and second dynasty.

Type XV is a bowl with rim which shows in some cases the beginning of recurvature. see also type S xxii<sup>a</sup> 2 with spout hole. The same forms occur in pottery see type XXI c 4, But neither pottery nor stone forms are recorded previous to the first dynasty. The earliest recorded examples are those in the tomb of *Wdj-mw* (Den) see *IA* vii 26, and in b 91 at el Amrah, see *el Amrah* xvi. But the same forms in ivory with a cord pattern in the hollow of the rim, were found in the tombs of *Dr* (Zer) and *Dt* (Zet), see *II R. T.* v 5, xxxiv 86, 91, xxxvi 43, xxxviii 36 and *I R. T.* xxxvi 6. This type seems to be the prototype on the one side of the small rimmed bowl so common in our third dynasty cemetery N. 500 (see *el Kab*, x 44, p. 8 stairway 8; *Reqaqnah*, vii R 40, stairway; *Mahasna*, xxiv, K 5, xxvii 14, K 3 stairway; and the small tombs *el Amrah*, vii b 10; *Naqada*, B 172; *el-Kab* p. 6, No. 88, p. 9, No. 166, and Pl. 27); and on the other side, it is the prototype of the stone bowls with recurved rims which are almost characteristic of the third and fourth dynasties and were copied in the characteristic pottery forms of that period. The small bowl with recurved rim occurs all through the fourth to sixth dynasties.

Type XVI is really a doubtful fragment. No bowls with recurved rims were found at Naga-ed-Dêr previous to the stairway tombs, except accidental fragments of this sort.

Type XVII a 1 = 1512, 15 (alabaster).

- a 2 = 1512, 24 (slate); 1571, 13 (a.); 1514, 3 (v.).  
 a 3 = 1514, 5 (v.); 1513, 26 (sl., ring).  
 a 4 = 1514, 18 (v.).  
 a 5 = 1513, 21 (a.).  
 a 6 = 1512, 40 (a.).  
 a 7 = 1571, 11 (v.).  
 a 8 = 1514, 9 (a.); 3017, 23 (a.).

XVII b 1 = 1532, 2 (lst. bl. with w. veins).

- b 2 = 1512, 42 (v.); 1514, 15 (a.)  
 b 3 = 1571, x 30 (v.); 1514, 14 (a.); 3031, 4 (a.)  
 b 4 = 1514, 20 (v.), 3017, 26 (a.); 3031, 30 (a.).  
 b 5 = 1515, 1 (a.).  
 b 6 = 1532, 4 (v.).  
 b 7 = 1512, 26 (lst.).  
 b 8 = 1514, 8 (v.).

XVII a 9 = 1513, 65 (a.).

- a 10 = 1513, 34 (a.).  
 a 11 = 1532, 1 (v.).  
 a 12 = 1512, 41 (w. lst.).  
 a 13 = 1514, 6 (a.).  
 a 14 = 1514, 2 (v.).  
 a 15 = 1572, 22 (a.).

XVII b 9 = 1514, 21 (v.).

- b 10 = 1513, 47 (v.).  
 b 11 = 3016, 7 (sl.).  
 b 12 = 1512, 39 (sl.).  
 b 13 = 1512, 24, x (v.); 1571, x 38 (v., dep.), 1514, 26 (a.).  
 b 14 = 1571, 6 (a.); 1571, x 51 (a., very thin).

<sup>1</sup> The form *Mahasna* xiv, 25 has probably no relation to this type. The same form occurs N. 624.



Type XVII b 15 = 1571, 1 (v.); 1514, 19 (a.); 1514, 22 (m. veined).

b 16 = 1514, 25 (a.); 1514, 26 (a.); 1513, 46 (v.)

b 17 = 1513, 51 (a.).

b 18 = 3031, 18 (a.).

b 19 = 3017, 34 (v.).

b 20 = 1571, x 31 (s.); 1571, 8 (s.);  
1571, 2 (s.); 3016, 15 (s.).

b 21 = 1514, 23 (v.).

b 22 = 3015, 7 (calc. a.).

b 23 = 1515, 4 (a.); 1572, 8 (v.).

b 24 = 1513, 44 (v.); 1513, x (v., ring);  
3011, 12 (m.).

b 25 = 3016, 6 (a.).

b 26 = 3017, 37 (a., thin).

XVII c 1 = 1523, 5 (r. and w. br.).

c 2 = 1882, 8 (a.).



201. Type XVII, 1 : 10.

These have all been smoothed by rubbing which removed the boring marks and left a finely scratched surface inside and out. The circular depression and the ring in the bottom do not seem to have been made in boring but as part of the finishing process. In cases like b 1 the ring is an incised line made by a revolving point or pair of points, such as the metal-shod (?) tips of the forked boring shaft, or by the lower edge of a metal tube. In some cases, this ring has been bored straight through the bottom (1512, 63; 1514, 13; 3031, 4) and a false bottom set in afterwards. The circular depression, like a 7 and a 9, may have been made by starting with a ring and rubbing away the elevated central part. Type *a* is distinguished from type *b* by the straightness of its sides, and type *c* is distinguished by the shape of the rim which is in section merely a slight swelling of the wall of the bowl. The forms of *b* with the higher numbers have a rim approaching that of *c*. Type *c* is the most common form in cem. 3500, 500—700 (i. e. 3<sup>rd</sup> dyn.).

The bowls type xvii a, b and type xviii are, I believe, characteristic of the 1—2 dynasties, occurring neither in the predynastic nor in the third dynasty. We have never found a bowl with a thick rim in any of our four predynastic cemeteries. Nor is there a single example recorded in the description of the predynastic graves at Nagada, Diospolis, el Amrah, el Kab or Hierakonpolis. None are recorded from the Menes tomb nor from the tomb of *Dt* (Zet). But they are found in the other royal tombs of the first and second dynasties, see *II R. T.* XLVI—LIII. The third dynasty forms are xvii b 18—26, c and xviii 11—13, see *Mahasna* XII—XIII. These bowls probably performed the function of the predynastic broad pottery bowls.

Type XVIII 1 = 1512, 12 (s.); 1514, 4 (s.)

2 = 1571, 4 (v.); 1535, 1 (s.); 1513, 20 (s.); 1605, 14 (s.); 3031, 31 (a.).

3 = 1512, 64 (s.), 57 (s.), 63 (s.), 20 (a.), 48 (a.); 1571, 2 (s.); 1513, x (Pl. 47 left of 21) (a.)

4 = 1571, x (s.).

5 = 1512, 1 (s.), 56 (s.); 1572, 14 (v.), 17 (v.), x (v.); 3053, 3 (s.).

6 = 3001, 7 (l. a.).

7 = 1513, 18 (s.); 3017, 64 (a. thin); 3052, 11 (s. thin).

8 = 1515, 2 (v.).

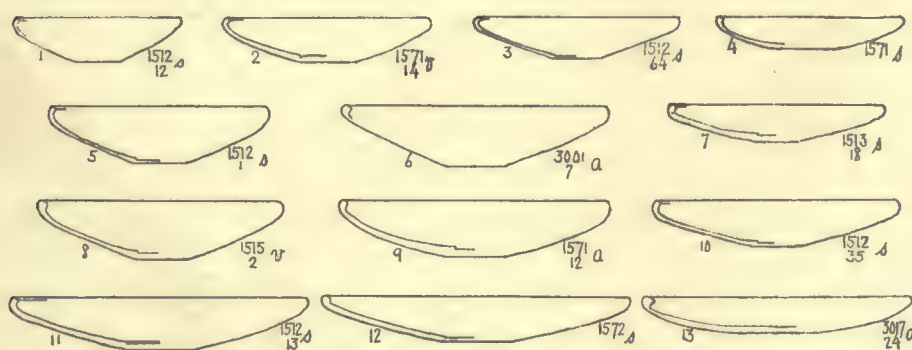
9 = 1571, 12 (a.); 1571, x (a.); 3017, 24 (a.).

10 = 1512, 35 (s.); 1514, 1 (s.); 1513, 12 (s.), 13 (s.), x (s.); 3051, 4 (s.).

11 = 1512, 13 (s.), 14 (s.), 34 (s.); 3071, 4 (a.); 3016, 18 (a.).

12 = 1572, x (s.).

13 = 3017, 29 (a.); 3071, 4 (a.).



202. Type XVIII, 1:10.



203. Type XIX, 1:10.

Type XIX = 3017, 22 (red and white breccia).

Cf. *II Origines* Fig. 616; *I Abydos*, Pl. 44, tomb M. 17; Pl. 47, tomb M. 19;

*II R. T.* Pl. 47 A., etc. See below type xx.

Type XX a 1 = 1513, 38 (v.).

a 2 = 3031, 8 (v.).

XX b 1 = 3013, 2.

XX c 1 = 1513, 41 (white l.).

c 2 = 1581, x (v.).

c 3 = 1513, 5 (v.).

c 4 = 1513, x (Pl. 46, right of 5) (v.).

c 5 = 1514, 7 (a.).

c 6 = 1571, x (a.).

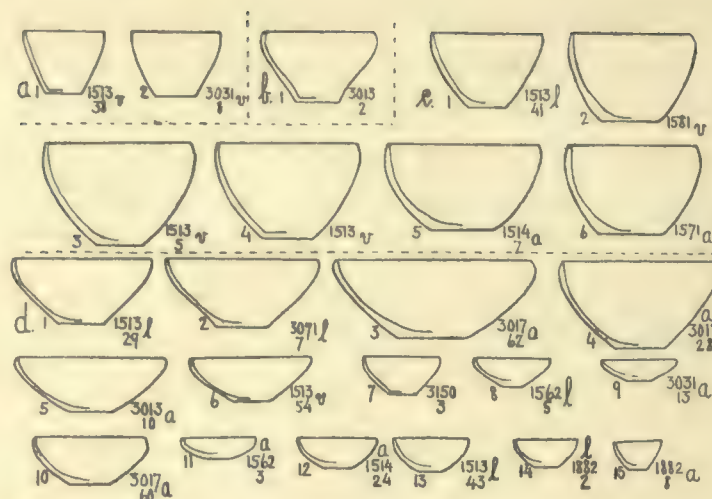
XX d 1 = 1513, 29 (white l.).

d 2 = 3071, 7 (l.).

d 3 = 3017, 62 (a.).



- Type XX d 4 = 3017, 28 (a).  
 d 5 = 3013, 10 (a. thin).  
 d 6 = 1513, 54 (v.).  
 d 7 = 3150, 3 (soft fine-grained black stone).  
 d 8 = 1562, 5 (l.).  
 d 9 = 3031, 13 (a.).  
 d 10 = 3017, 60 (a.).  
 d 11 = 1562, 3 (a.).  
 d 12 = 1514, 24 (a.).  
 d 13 = 1513, 43 (l.).  
 d 14 = 1882, 2 (l.).  
 d 15 = 1882, 8 (a.).



204. Type XX, 1 : 10.

Cf. the pottery forms type xxiv a-c.

The earliest forms of stone bowls, those occurring in the predynastic period, are *small* thin lipped bowls not essentially different in form to types xx, xxiii and xxiv. These bowls without lips become larger and very numerous in the first dynasty, see *II Origines* Fig. 573—624 and *II R. T.* XLV—LIII; and continue in general use until stone vessels were displaced by wheel-made pottery. After that they are rare. The cup-like forms with straight sides xx<sup>a</sup> were very frequent in the third dynasty, see *Mahasna* XIV 21—23.

These stone forms resemble the pottery forms type xxiv a-c, which are traceable to predynastic types, and both stone and pottery forms were probably used for the same purpose.

Type XXI 1 = 1513, 22 (v.).

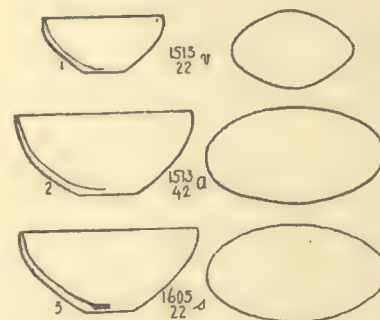
2 = 1513, 42 (a.).

3 = 1605, 22 (s.).

Type XXI is the same as xx<sup>c,d</sup> except that it is oval in form. Oval pottery pans occur in the predynastic period, *Naqada* F II-24.

Type XXIIa 1 = 3012, 3 (s.) } with spout hole.  
 2 = 3015, 12 }

XXIIb 1 = 1513, 25 (p. l.); 3017, 41 (y. l.) } with open spout.  
 (with shorter spout)  
 2 = 3016, 14 (l.).  
 3 = 1571, 24 (v.).

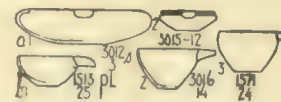


205. Type XXI, 1 : 10.

Bowls with open spouts do not occur before the second dynasty at Abydos or Naqada (except perhaps *IA* XLVII M. 24 6). They are not frequent even then. Similar bowls with open spouts occur later but with longer spouts. In none of the above examples was any trace of oil, wick or burning found to indicate their use as lamps. See pottery type xxii, xxiii.

Type XXIII 1 = 1571, x (v.).

2 = 1515, 11 (a.).



206. Type XXII, 1 : 10.

Type XXIII 3 = 1513, 9 (l.).

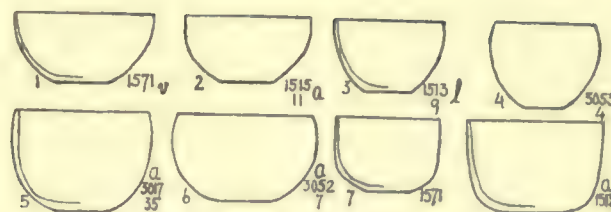
4 = 3053, 4 (a.).

5 = 3017, 35 (a.).

6 = 3052, 7 (a.).

7 = 1571, x 34 (bl. l. with white spots).

8 = 1513, x (Pl. 47<sup>a</sup> under 32) (a.).



207. Type XXIII, 1:10.

Type XXIV 1 = 1513, 11 (a.).

2 = 1882, 3 (a.).

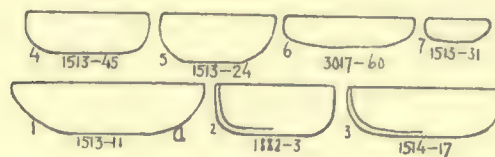
3 = 1514, 17 (a.).

4 = 1513, 45 (a.).

5 = 1513, 24 (a.).

6 = 3017, 60 (a.).

7 = 1513, 31 (a.).



208. Type XXIV, 1:10.

Type XXV 1 = 1512, 20 (a.).

2 = 1514, 11 (v.).

3 = 1514, 12 (s.).

4 = 1571, 5 (s.).

5 = 1513, x (Pl. 47<sup>a</sup> beside 9) (p.l.).

6 = 1605, 25 (l.).

7 = 1572, x 26 (a.).

8 = 1572, x 21 (a.).

9 = 1571, x 50 (a.).

10 = 3017, 32 (a.).

11 = 3031, 12a (v.).

12 = 3001, 6 (l.).

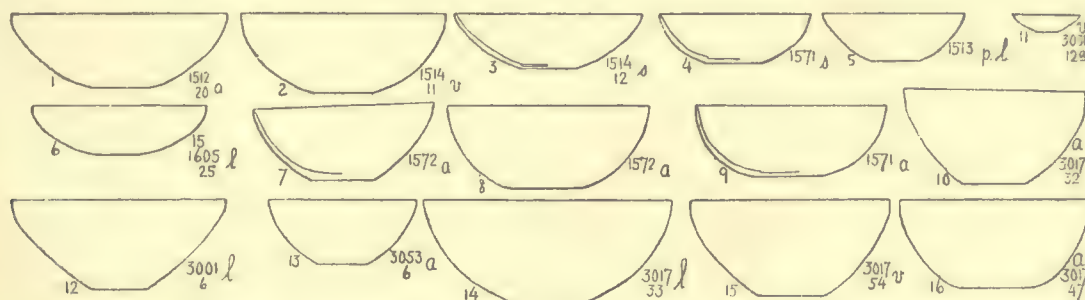
13 = 3053, 6 (a.).

14 = 3017, 33 (l.).

15 = 3017, 54 (v.).

16 = 3017, 47 (a.).

Cf. pottery type xxv. Numerous examples of types S xxiii—xxv occur at Abydos, see *II R. T.* 46—52 and *I. A.* 42—47.



209. Type XXV, 1:10.

Type XXVIa 1 = 1514, 10 (s.).

a 2 = 1514, 13 (s.).

a 3 = 1514, 16 (s.); 1571, 9 (s.);

3017, 49, 65 (s.).

a 4 = 3031, 5 (s.).

a 5 = 3017, 41 (a.).

XXVIa 6 = 3017, 31 (s.).

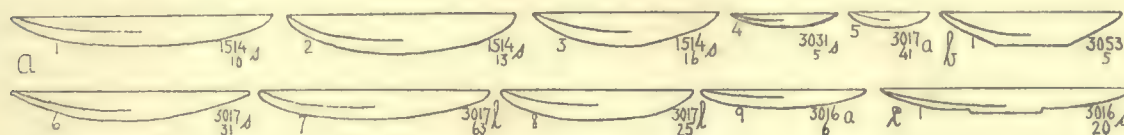
a 7 = 3017, 63 (l.).

a 8 = 3017, 25 (l.).

a 9 = 3016, 6 (a.).

XXVIb 1 = 3053, 5 (a.).

XXVIc 1 = 3016, 20 (s.).



210. Type XXVI, 1:10.

Cf. pottery forms type xxvi. These plates *a* do not occur in any of the *M*-tombs at Abydos (see *I Abydos*, Pl. 42—47) nor in any of our wood-roofed tombs. But they do occur in the wood-roofed royal tombs at Abydos (see *II R. T.*, Pl. 51 F, tombs o, b, z, y; Pl. 51, tombs r, u, q; Pl. 49<sup>A</sup>, tombs u, q, y, p; Pl. 51<sup>B</sup>, tomb y; Pl. 51<sup>C</sup>, tomb z).



## XII. FLINT IMPLEMENTS.

*Degeneration of flint working.*

ALL the flints found in our two cemeteries are roughly chipped. The large knives are very clumsy impractical blades—probably purely ceremonial in usage. The small flints, of unknown usage, are in part better work; and all of them have keener cutting edges than the large knives. It may be that they are a cheap form of knife; or, what is more probable, they may have served a perfectly practical purpose in some traditional ceremony like circumcision.<sup>1</sup>

**Type I.** N. 1581, 1, Pl. 40<sup>a</sup>, late first dynasty.

N. 1586, 2, Pl. 40<sup>b</sup>, second dynasty (broken, small piece missing near handle).

Curved blades with bulging tip and handle, rough chipped on both sides. Apparently derived from the broad knife of the predynastic period, cf. II below, or from a copy in copper (no example known) of the broad knife. This handled flint knife continued in use with a slight variation in form certainly through the twelfth dynasty. See *el-Kab* p. 8, stairway tomb 226 (third dyn.); cf. *Denderah* Pl. 20, 30 (sixth dyn.), *Illahun* Pl. 7, 16 (twelfth dyn.); bronze blades *Kahun* Pl. 17, 18—21.

Other dated examples are recorded: *I Abydos* xiv—xv where a series is given extending from the very early first dynasty (cem. B) to the end of the second dynasty. See also stela 24. This series is interesting in that the forms subsequent to *Wdj-mw* (Den) have almost no curve on the back and have a less bulging tip. The forms found in the tomb of Khasekhemui are practically the same as these of the sixth and twelfth dynasties just noted. The two forms found in our cemeteries resemble those found in tomb B 10, *Dt*, *Mryt-neit*, and *Wdj-mw* (Den). This fact is especially interesting for the spread of forms, as our tombs are about half a dynasty later than the Abydos tombs in which the same forms were found.

**Type II.** N. 1514, 48, Pl. 40<sup>a</sup>, second dynasty.

Curved blade with bulging tip, like I above but without handle. Apparently derived from the broad knife of the predynastic period. The earliest dated examples were found in the Menes tomb, see *II Origines* Fig. 769 and pp. 160—164 (six perfect examples and fragments of 30—35 others). See also stela 27. This flint knife continued in use alongside type I above with nearly the same variations in form and for the same length of time (i. e. certainly through the twelfth dynasty). See the interesting examples found by Petrie in the Osiris temenos at Abydos, *I Abydos* Pl. 16—19; see *Denderah* Pl. 32; *Kahun* xvi; *Illahun* vii, 7, xiii, 6. This is the knife represented with a cord(?)—handle in the manufacture of flints, *III Beni Hassan* p. 34, 35.

The dated examples of the first dynasty besides the Menes knives mentioned above are: *I Abydos* xvii, 42 (cem. M. 13) and 28 (cem. M. 14), xiv various fragments: probably also *Hierakonpolis* xxv (from the main deposit) and LX, 1—5.

**Type III.** N. 1581, 7 pieces, Pl. 40<sup>b</sup>, late first dynasty.

N. 3551, one piece, Pl. 40<sup>b</sup>, second dynasty.

Small flint chips usually more pointed at one end than the other and worked on the blunt end. One side is flat or slightly concave. These chips may be descendants of the tailed

<sup>1</sup> The well preserved male bodies found by Lythgoe in our predynastic cem. 7000 all showed circumcision.

scrapers so common in predynastic times; or they may have served the same purpose as the common flint flakes which show marks of usage, see Balfour in *El Amrah* 44—45. See *Naqadah* LXXI, 33. The earliest dated examples were in the Menes tomb, see *II Origines*, Fig. 771 to 774 and pp. 160—164.

Petrie *I Abydos* XIV—XV gives a series running through the first two dynasties. See also *el Kab* p. 9 § 13, Pl. 2, 2 (third dynasty); *Medum* XXIX, 23 (fourth dynasty.) Mace found one in our third dynasty cemetery, N. 5147. We have also found two examples in the Cheops cemetery at Gizeh (not yet published). See further *Kahun* XVI (twelfth dynasty); *Illahun* VII, 6, 12.

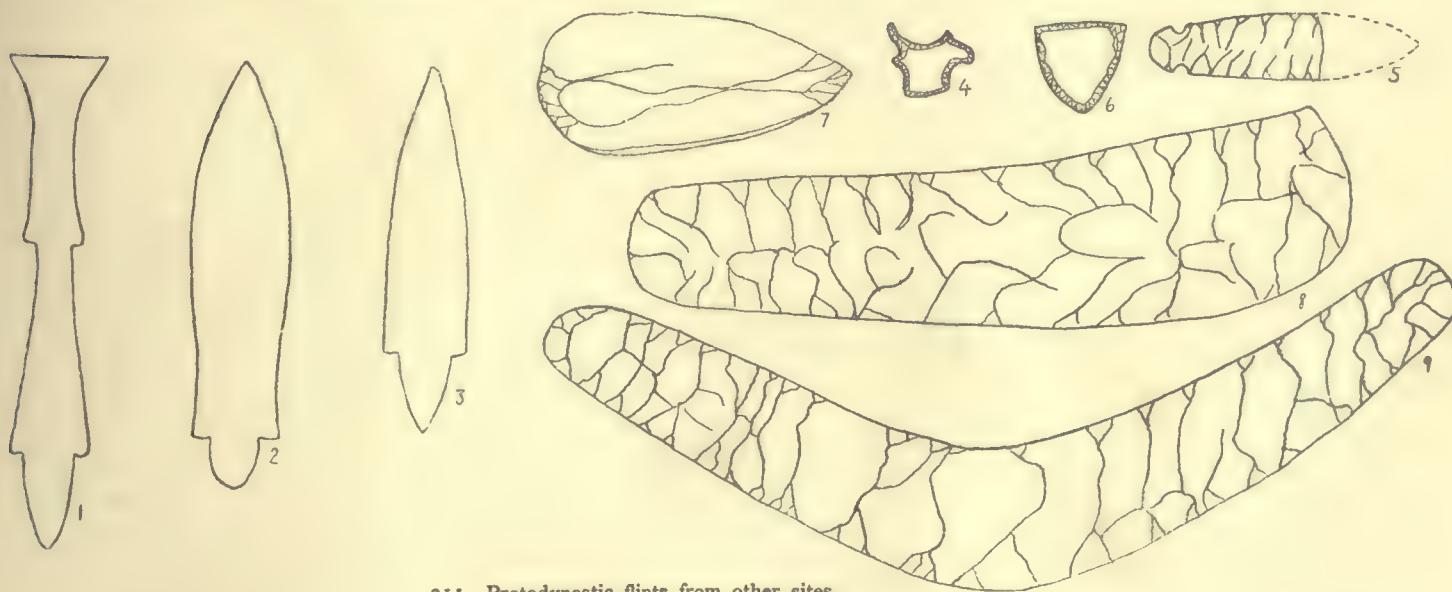
- Type IV.** N. 1581, 9, 12 pieces, Pl. 40<sup>b</sup>, late first dynasty.  
 N. 1538, 1, Pl. 40<sup>b</sup>, late first dynasty, with 5 flint nodules.  
 N. 1515, 12, Pl. 40<sup>b</sup>, second dynasty.  
 N. 3551, 4 pieces, Pl. 40<sup>b</sup>, second dynasty.

Small flint chips with worked ends either rounded or square. In general the square ended chips seem to be later. These may also be related to the flakes and scrapers mentioned above, under III. The earliest dated examples were in the Menes tomb, *II Origines* Fig. 770 and pp. 160—164 (with rounded ends). Petrie's series from the royal tombs, *I Abydos* XIV—XV, shows the first square ended pieces in the tomb of *Dt* and a preponderance of that type in the second dynasty. Flat ended flints were also found by Mace in our third dynasty cemetery, N. 4370; N. 4139, 6, 7; N. 2939, 2; N. 4771 (see *Naga-ed-Dêr* II, Pl. 45). See *Naqadah* p. 5 Q 107 and p. 6 Q 522, both stairway tombs of the third dynasty<sup>1</sup>, and p. 16 Q 81 (fourth dynasty?). At Gizeh we have found several pieces in the Cheops cemetery, G. 1225; 1201, 22; 1233; 2500.

See also *Medum* XXIX 26 (fourth dynasty).

- Type V.** N. 1529, Pl. 40<sup>b</sup>, late second dynasty.

Flint chip with one serrated edge like a sickle flint. Three sickle flints were also found by Mace in N. 5147 (third dynasty). They occur in all periods. See *Hieroglyphs*, p. 48 (cf. *Kahun* IX, 22, XVI; *Illahun* VII, 27).



211. Protodynastic flints from other sites.

<sup>1</sup> A number of other pieces are mentioned *Naqadah*, Pl. 75, 96—98, but not mentioned in the text.



Other  
proto-  
dynastic  
types.

These are all the forms of flints found in our two cemeteries; but a number of other forms dated to the first two dynasties were found by Petrie at Abydos and several forms were found at Hierakonpolis which may also be of this date:

- a) Arrow-heads, *II R. T.* vi (*Dr*) 5—15, Fig. 211, 1—3 (4:3).
- b) Animal forms, *I Abydos* xiv (*Dr*) Fig. 211, 4 (2:7), cf. XXVI, 292—294.
- c) Pointed forms with double notch at the handle end, *I Abydos* xiv (*Dr*) Fig. 211, 5 (2:7).
- d) Scrapers, etc., *I Abydos* xiv—xv (Menes-Khasekhemui), Fig. 211, 6, 7 (2:7).
- e) Big knives similar in form to the predynastic broad knives (*Naqadah* LXXIV, 86) and the curving knives (*Naqadah* LXXIV, 84), *Hierakonpolis* xxv, Fig. 211, 8, 9 (1:3-5).

### XIII. COPPER IMPLEMENTS AND ORNAMENTS.

Value of  
copper.

The number of copper objects found was small when we consider that this was the period when copper must have played its greatest role in Egyptian history. But on the other hand copper and bronze objects have never been found in great numbers in Egyptian tombs until very late times. Like gold ornaments, they were either too valuable to be placed in the tombs or they have attracted in an unusual degree the attention of plunderers. This value set on copper objects was no doubt the basis for the later custom of putting in the graves models in copper of copper vases, tables, and weapons instead of the actual objects.<sup>1</sup>

#### 1. Implements and Weapons.

Practical  
implements.

The copper implements found in our cemeteries and indeed in all other first dynasty cemeteries, are strong and practical often showing marks of usage.

**Type I.** N. 1513, 1, Pl. 40<sup>c</sup> below.

Adze (?) with the broad edge sharpened. The shape reminds us of the long stone ax heads found by us in the predynastic camp on the desert near Keft (Coptos) and still more of the so-called flint hoes. The known examples are:

*Naqada*, p. 20 tomb 39, late middle predynastic grave, *plundered*, with two flints, l. c. Pl. 74, 84 and wavy handled jars.

*Naqada*, p. 22 tomb 400, very late predynastic grave, *plundered*, with pottery L 33, L 50, L 88, and W 71—80.

*Hierakonpolis II*, p. 26 § 65, two copper chisels and an adze blade were found in an archaic tomb but the tomb is not described and cannot, therefore be dated.

*Origines II*, p. 251, Fig. 833, 835, 836, from Amelineau's work at Abydos probably from first or second dynasty.

*II R. T.* XLV, 77, Khasekhemui, second dynasty, more slender than our example.

<sup>1</sup> Models of copper implements cut out of thin sheets of copper appear to come into use in the second dynasty, *II R. T.* p. 28 (Khasekhemui). A number were found by MACE in our cemetery 3500, *II Naga-ed-Dêr* N. 4376, N. 4506, N. 4517 (late second and third dynasties). See *Requah* Pl. 6, model vases and knives (third dynasty); also *el-Kab* XVIII 56—65 (Sneferu-period); GIZEH 1309, copper ewer and basin (fifth dynasty); *Denderah* § 7 Pl. 22 (sixth dynasty); our tomb N. 3739 (sixth dynasty); *Diospolis* Pl. 25 vases (sixth dynasty); MACE *el-Amrah and Abydos*, p. 86, Pl. 38, copper models of wooden and woven utensils (xviii<sup>th</sup> Dyn.); l. c. p. 86, Pl. 40, bag, (xviii<sup>th</sup> Dyn.); l. c. p. 89 Pl. 46 adze (xviii<sup>th</sup> Dyn.); *Theban Temples*, Pl. xvi and xviii tools, foundation deposits of Tausert and Siptah (end xix<sup>th</sup> Dyn.); *el-Amrah and Abydos*, p. 88, Pl. 45 axe, hoes, chisels (xx<sup>th</sup> Dyn.).

*Mahasna*, xvi, 3, from K 1, third dynasty.

*Mahasna*, xxiii, 20, from K 2, third dynasty.

*el-Kab*, xviii, 61, from Ka-mena, fourth dynasty.

**Type II.** N. 1513, 2<sup>b</sup>, Pl. 40<sup>c</sup> above on the right.

Adze (?), narrow, with round butt. The recorded examples are:

*Diospolis*, p. 36, U 74, probably a late predynastic grave, *plundered*.

*II R. T.*, vi, 23, from O 23, a first dynasty grave in the *Dr* (Zer) cemetery.

*I Abydos*, L, from M 13, first dynasty.

*II R. T.*, xlv, 78—80, Khasekhemui, second dynasty.

*Mahasna*, xvi, 5, 6, 7, 10, 11, 19, 25, 29 and xxiii, 33, from K 1 and K 2, third dynasty.

*el-Kab*, xviii, 64, from Ka-mena, fourth dynasty.

*Medum*, xxix, 11, from Ra-hotep, fourth dynasty.

This adze continued in use down to the twelfth dynasty with a slight change of form, and was found among the model tools in the foundation deposit of Thothmes III, *I Abydos* LXI.

**Type III.** N. 1513, 2<sup>a</sup>, Pl. 40<sup>c</sup> above on the left.

Axe head for battle-axe. Appears to be a later form than I above if the two Naqada cases can be relied on.

*Diospolis*, p. 36 tomb U 74, not dateable from the description, probably first dynasty or late predynastic, *plundered*. Rather longer than N. 1513, 2<sup>a</sup>.

*I Abydos*, L tomb M 13, early first dynasty.

See also the representations on the ivory tablets of Den and Mersekha:

*I R. T.*, xv, 16 (*Wdj-mw* = Den), xvii, 26 (*Šmr-ḥt* = Mersekha).

*II R. T.*, xlv, 76, Khasekhemui, second dynasty.

*II Origines*, Fig. 830, 839, 840, from Abydos.

*Mahasna*, xxiii, 25, 26, from K 2; xvi, 21, 22 (models?), third dynasty.

*el-Kab*, xviii, 60, from Ka-mena, fourth dynasty.

*Medum*, frontispiece 14, x, xiii representations in colored relief.

The later forms are nearly semicircular. This axe head continued to be used with slight variations until the new kingdom.

**Type IV.** N. 1513, 3, Pl. 40<sup>c</sup> on the right middle.

N. 3016, 19. N. 3016, 21.

Copper chisel<sup>1</sup>. The recorded examples are:

*Naqada*, p. 27 tomb 807, late predynastic grave, *plundered*, with decorated pot (D 67<sup>c</sup>), a rough slate palette and another copper blade.

*Naqada*, p. 27 tomb 1233, late predynastic grave with rough flint knife (LXXIV, 81), rough flint lance (LXXIII, 63) and late pots (L 40).

*Diospolis*, p. 36 tomb U 74, late predynastic or early first dynasty.

*Hierakonpolis*, p. 26, two chisels and on adze were found in an archaic tomb, not described.

*II R. T.*, vi, 18, 25, 26, from O. 31; xxxviii, 94 from cem. W.; xli, 90—93 tomb of Den; all first dynasty.

<sup>1</sup> *Naqada*, LXV, 9, 10, 13, 14, 15 are numbered below 162 but are not mentioned in the description of tomb 162 on p. 25, nor in the description of stairway (?) tomb 162 on p. 5.



*Il R. T.*, XLV, 65—75 (models) from tomb of Khasekhemui, second dynasty.

*Mahasna*, XVI, 16, 17, 18, 23—31; XXII, 1—34, from K 1 and K 2, third dynasty.

*El-Kab*, XVIII, 56—58, from Ka-mena's tomb, fourth dynasty.

The same chisel occurs with variations through the new kingdom.

Date of the  
earliest  
copper  
implements.

A number of other copper implements and weapons have been found in the late predynastic and early dynastic period which complete the evidence that copper implements were introduced at the end of the middle predynastic period and reached their full development in the first two dynasties. The recorded pieces in the predynastic period are alone of importance for our present purpose and are:

*Naqada*, p. 22 tomb 836, a grave not earlier than late middle predynastic, — *a copper dagger*, copy of a flint form.

*Naqada*, p. 23 tomb B 99, late middle predynastic, — *a copper harpoon*, copy of the earlier bone form.

*Naqada*, p. 27 tomb 807, late predynastic, — *a broad oval blade*.

*el Amrah*, p. 20 tomb A 131, late middle predynastic, — *a copper dagger*, copy of a flint form (*Naqada*, LXXII, 51, 56).

*el Amrah*, p. 23 tomb b 230, late middle predynastic, — *a copper dagger*.

#### SMALL IMPLEMENTS.

*Diospolis*, p. 34 § 51 cem. C., *a copper pin*, these graves may be merely poor graves of the middle predynastic period.

*el Amrah*, p. 18 tomb a 139 *a copper pin*, middle predynastic.

*Naqada*, p. 28 tomb 1485, *a copper pin*, middle predynastic.

*Naqada*, p. 29 tomb 1821, *a copper pin*, middle predynastic.

*Naqada*, p. 24 tomb 3, *copper needles*, late middle predynastic.

*el Amrah*, p. 21 tomb a 65, *a copper needle*, late middle predynastic.

*el Amrah*, p. 18 tomb b 117, *a copper needle*, late middle predynastic.

*el Amrah*, p. 21 tomb b 189, a small implement curved at one end, late middle predynastic.

*Naqada*, p. 21 tomb 218, *copper piercer* (?) double burial, plundered, late (?) middle (?) predynastic.

*el Amrah*, p. 21 tomb b 235, *a cylindrical piece of copper*, late middle predynastic.

*el Amrah*, p. 23 tomb a 104, a pair of *copper tweezers* late (?) predynastic.

## 2. Ornaments and other objects.

For list of copper ornaments found in N. 1500 and N. 3000, see below chapter on beads, bracelets etc. The copper objects recorded from predynastic sites are as follows:

*El-Amrah*, p. 16 a 58, pieces of *thin folded copper*, early predynastic period.

*Naqada*, p. 21 tomb 218, *copper band* (from end of a staff?), double burial plundered, one burial is middle predynastic.

*Naqada*, p. 24 tomb 22, small *twisted piece of copper* like a model horn (cover for a wooden spear point?) from a double burial, one of which was plundered, middle predynastic.

*el-Amrah*, p. 18 b 28, *copper finger ring*, middle predynastic.

*el-Amrah*, p. 21 b 62, *three copper wire bracelets*, late middle predynastic.

*el-Amrah*, p. 21 b 210, *copper bracelet*, late middle predynastic.

*Diospolis*, p. 34 tomb B 378, *copper bracelet on wrist*, late predynastic.

*Naqada*, p. 27 tomb 1248, *copper bracelet*, very late predynastic.

*Diospolis*, p. 32 tomb B 57, *copper wire bracelets*, very late predynastic.

*el-Amrah*, p. 54 tomb X 51, *copper ring*, very late predynastic.

*el-Amrah*, p. 16 tomb a 67, *two copper rings and a small chain*, late predynastic.<sup>1</sup>

*Naqada*, p. 28 tomb 1480, *two thin oval sheets of copper punctured in lines* (cf. gold capsule in N. 1532 above), date uncertain possibly late predynastic.

### 3. Summary.

This material shows that during the latter part of the middle predynastic period, we have with certainty copper daggers, spear heads, harpoons, pins, needles, wire bracelets and rings. In the late predynastic period, a number of copper implements have come into use, chisels, adzes, axes, tweezers, etc.; and flint daggers, knives and lance-heads and bone harpoons have apparently disappeared. In the first dynasty, the Egyptians are in possession of a full equipment of copper weapons, implements and ornaments and retain only degenerated ceremonial forms of the old flint weapons and implements.

## XIV. BEADS, BRACELETS, TOILET DISHES, etc.

A list of beads and other ornaments found in the two cemeteries is given below. The only points which need be noted especially are:

1. The copper bracelets and rings and the gold bracelets and rings are thin hammered strips which seem to have overlaid wood or cement while the predynastic metal bracelets are usually hammered wire. Flint gradually displaced by copper.
2. Flint, slate and other stone bracelets are new and characteristic of this period. They imitate in form the older bone and ivory bracelets, which still occur.
3. Long cylindrical or barrel-shaped beads of stone are far more numerous than in the predynastic periods. These long beads were probably bored by a metal (copper) drill in the same manner as the stone cylinders.<sup>2</sup> The slender tube beads, or cylindrical beads, both long and short and especially the strings of alternating black and white beads are characteristic of the protodynastic period.<sup>3</sup>

<sup>1</sup> MacIver dates this tomb previous to S. D. 41, solely I believe on type of burial. But graves of his class I are found as late as the third dynasty.

<sup>2</sup> See Petrie in *Naqada*, p. 44 § 65, for explanation of the manner in which the outside of these beads was polished. See II *Hierakonpolis*, p. 12 § 31 for bead factory found by GREEN.

<sup>3</sup> Tube beads are represented in a picture in *Diospolis* v B 101 showing the contents of a tomb of the middle predynastic. In the text p. 33 they said to be carnelian beads found on the arm of a girl in a "plundered out" tomb. There were possibly several burials and these beads do not necessarily belong to the other objects found here. The beads, *el Amrah*, Pl. 7 tomb a 96 are thicker than the early dynastic beads.



## LIST OF BEADS AND OTHER ORNAMENTS.

*Beads.*

Cylindrical beads<sup>1</sup> (tube beads) both short and long:

1. Black steatite and white stone beads: N. 1532 with the gold find; 1501, 4 with seal cylinder; 1603 in debris; 1531 $\beta$  at neck; 1634 in debris; 1513, on skeleton B; 1562, 2 with seal cylinder; 1535 at neck; 1529, 5; 3031, 6; 3091, 1 one bead.
2. Fine green stone beads, small: N. 1532, with gold find; 1604, 1 with seal cylinder.
3. Haematite: N. 1532, Pl. 8, no. 2 one bead, large bore.
4. Carnelian: N. 1532, Pl. 8, rows 1, 2 and 3 excepting the middle beads; N. 3031, 6 one bead; 3013, 14.
5. Blue glazed beads: N. 3091.

Barrel-shaped beads:

1. Carnelian: N. 1532 with the gold find, Pl. 7 nos. 1—2; 1584, 5; 1604, 1; 3061, 2; 3018, 4; 3031, 6.
2. Haematite: N. 1532, Pl. 7 no. 3.
3. Blue glazed beads: N. 1584, 5 $\beta$ ; N. 1604, 1; 3018 4; 3017, 41 $\epsilon$ ; 3013, 14.
4. Amethyst: N. 1532, Pl. 8, 4; 3013, 14.

Spherical beads:

1. Blue glazed beads: N. 1532, Pl. 8, 5; N. 1604, 1; 3018, 4; 3013, 14.

Disc beads (the most common form from the predynastic period down to the latest times):

1. Carnelian: N. 1532, Pl. 8, 13—16; 3061, 2; 3018, 4; 3031, 6; 3091, 1; 3025, 3.
2. Garnet: N. 1532, Pl. 8, 10—11; 1584, 5 $\alpha$ ; 3025, 3.
3. White beads (shell or limestone?): N. 1603, ; 3018, 4; 3061, 2.
4. Blue glazed beads: N. 1532, Pl. 8, 12; 3018, 4; 3013, 14; 3061, 2; 3091, 1.
5. Steatite(?): N. 1603, Pl. 42, 1;
6. Syenite(?): N. 1532, Pl. 7, 1.

For metal beads of various forms see N. 1532, Pl. 6 and 7 (gold), 3031, 14 and 3061, 2 (both copper).

*Amulets.*

The beads of unusual form and the amulets<sup>2</sup> are: syenite pendant, N. 1532, Pl. 7 no. 1; speckled stone pendant, N. 3061, 2; limestone pendant, N. 3018, 4; flat shell pendant, N. 1562, 9; bevelled carnelian bead, N. 3018, 4; limestone amulet (animal head), N. 3031, 6; blue glazed amulet (crouching animal), N. 3061, 2; shell used as bead, N. 1603, Pl. 42, no. 1; shell-shaped beads, N. 3018, 4 (shell or limestone), N. 3013, 14 (carnelian).<sup>3</sup> See also the shell-shaped, the spiral, and the barrel-shaped gold heads from N. 1532 and the bull and the gazelle amulets from the same tomb.

*Bracelets.*

Bracelets:

1. Slate: N. 1532, Pl. 9; 1512 fragment; 1592 two in debris; 1513, p. 52; 1584, 2.
2. Flint: N. 1532, Pl. 9; 1584, 3.

<sup>1</sup> For beads of the first two dynasties cf. *II R. T.*, xxxiii, 16—21 (m. 1), xxxviii, 8—29 (cem. W), xlii, 79—81 (cem. X), xlii, 10, 40—43 (tomb of *K'j'j'*); *I Abydos*, p. 16, Pl. 52 (M 14 and 17); *II Abydos*, viii, 153—170.

<sup>2</sup> For late predynastic and early dynastic amulets see *Nagada*, Pl. 58.

<sup>3</sup> The slate comb-like pendant in N. 1584 (Pl. 41 $\epsilon$ ) is too large to have been a mere pendant.

3. Shell: N. 1541; N. 1608, p. 35.

5. Copper: N. 1532, Pl. 9; N. 1571, 14.

4. Ivory: N. 1584, 4; 1605, Pl. 41<sup>b</sup>.

6. Gold: N. 1532, Pl. 9.

Dishes for cosmetics, etc.:

*Cosmetic  
dishes, etc.*

1. Natural shell: N. 1571, 28.

2. Slate dish: N. 1571, 29 (form of a fish); 1605, 12 (form of a bull's head).

3. Ivory ladle(?) with handle like an animal leg: N. 1584, 1.

4. Ivory dish, with cord pattern and flat handle; N. 1571, 27.

In addition to these objects there was in N. 1514, half of a carved ivory knob (? peg hole) (Pl. 41<sup>c</sup>) and in N. 1512, a fragment of a crystal goblet carved on the outside to represent a lotus flower half open (Pl. 41<sup>a</sup>).

## XV. WRITING.

### 1. Cylinder seals.

The material for the cylinder seals of the early dynasties is given in the fullest form by Petrie in *I R. T.*, Pl. 18—29 and *II R. T.*, Pl. 13—25, Nos. 1—218.<sup>1</sup> These are seals of royal persons, royal offices, or court officials. The number of dated seals of private persons, however, is extremely small although a number of undated seals have been bought for various collections. The fourteen cylinders and one seal impression found in our cemeteries form, therefore, an important addition to our knowledge on the subject.

List of fourteen seals and one impression:


*List of  
seals.*

<i>Photograph</i>	<i>Copy</i>	<i>Tomb</i>	<i>Tomb type</i>	<i>Date</i>
Pl. 9 c, d	Pl. 44	N. 1532 ✓	Large wood-roofed	Late I dynasty
43 i	44 i	1501, 1 ✓	Small wood-roofed	" I "
43 f	44 f	1604, 2 ✓	Small wood-roofed	" I "
43 d	44 d	1514 ✓	Large corbel-roofed	II "
43 o	44 o	1562, 3 ✓	Small corbel-roofed	II "
43 k	44 k	1605, 1 ✓	Large corbel-roofed	Late II "
43 p	44 p	1605, 2	" "	" II "
43 m	44 m	1605, 3	" "	" II "
43 n	44 n	1605, 4	" "	" II "
43 l	44 l	1605, 5	" "	" II "
43 j	44 j	1605, 6	" "	" II "
43 h	44 h	1605, 7	" "	" II "
43 e	44 e	1605, 8	" "	" II "
43 g	44 g	1605, 9	" "	" II "
43 c	44 c	3091 ✓	Small mud box	II " ?
43 b	44 b	1591, 1 ✓	Irregular hole	II " ??





























<sup>1</sup> These seals are numbered consecutively and are referred to in the following pages by these consecutive numbers. These are the numbers used also by QUIBELL in his *Catalogue of Archaic Objects*.





























Com-  
parison  
with the  
Abydos  
seals.











About 27 signs occur in these cylinders, most of which can be easily identified. Yet the reading of the inscriptions presents great difficulties owing to the difference in names and titles to the seals found at Abydos. At first glance it appears as if there were no analogies at all with the Abydos seals. Five of our seals (i, k, m, n, p) bear curious representations of a man seated before an offering table above which are  signs probably representing loaves of *tj*-bread as on the late third and early fourth dynasty stelae; and one seal (q), a man with an animal head instead of the offering table. Such figures, well known also from purchased seals (see Pl. 44 v, x, y), were not found at all at Abydos<sup>1</sup>. The difference between our seals and those of Abydos is probably due partly to the different titles<sup>2</sup> possessed by the people buried in the two cemeteries and partly to the greater excellence of the workmanship at the command of the Abydos families.

Reversal  
of  
proper  
names.

It seems *a priori* probable that the signs immediately in front of the seated figure represent a proper name, if a name be at all contained in the inscription. The six seals which have a seated figure give us the groups      and . An examination of the Abydos stelae and seals does not show any of these identical names; but it does show a large number of names compounded with  and , perhaps one compounded with  and one compounded with . Furthermore  is formed like  (seal 23),  (seal 16),  (seal 115),  (stela xxxii 27),  (stelae 93, 114). These are therefore not improbable combinations for proper names. Now three of these names are repeated in inverse order in the rest of the inscription:   and  ;   and  ;   (?) and  . This is the same sort of inverted repetition which we have in the Abydos seals *II R. T.* seals 161, 53—56,









      in which the proper name is written  and   
               







preceded by two different titles. *II R. T.* xx 158 is exactly similar with the same titles and the name  and ; and seals 35, 42 and 133 also bear names reversed in the repetition. Almost all these seals show reversals of the name only, repetitions of name and title, and other devices to secure perhaps symmetrical appearance or perhaps to guard against the mis-reading of the seal.

















Among our seals which lack the figure of a man, a group of signs is repeated reversed in three cases:  and  (1605, 1 = o.);  and  (1605, 8 = e.);   and   (1605, 6 = j.).<sup>3</sup> In 1605, 9 (g.) the name is apparently repeated:  and  (cf. seals *I R. T.* 10,

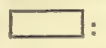
<sup>1</sup> El Kab, Pl. 20, 32 and N. 627, 6 present slightly similar figures but a glance suffices to show that they are of a totally different style; and an examination of the other contents of the two tombs in question shows that both are late third or fourth dynasty.

















































































<sup>2</sup> Most of the private persons at Abydos are women and children.






<sup>3</sup> A similar reversal is to be found *I A.* LI 27:    ; also *II A.* xvi 6  ; and cf. *Diospolis* x 34 (U 364, p. 36)  . See also Pl. 44 seals w, x and y.




12, 15, 18, 28—33, III, etc.). This name occurs also in 1605, 7 (h.) written once with one of the same titles  . In 1605, 5 (l.) again, the name seems to be merely repeated:   and  .

These names may be compared:   with   (stela 53),  (stela 74),   (stela 97), and   (stela 10);  with  (seal 30), and  (stela 8);  with the Horus name   (Perabsen) and with  (stela I A. XIII).




It follows that the remaining signs probably contain titles as in the case of the Abydos Titles. seals and the Bêt Khallaf seals (see Sethe *Mahasna*, p. 19). Since the seated figure is not part of the name, and is often omitted, it also is probably a title or part of a title. *Tentatively* then, the inscriptions on the seals may be arranged as follows. The names are enclosed in rectangles :



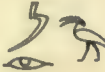


- q. 1532.      
- o. 1605, 1.      
- m. 1605, 3.      
- p. 1605, 2.      
- n. 1605, 4.      
- l. 1605, 5.      
- e. 1605, 8.      
- h. 1605, 7.    
- g. 1605, 9.      
- f. 1604, 2.    
- j. 1605, 6.       or      
- i. 1501, 1.      
- k. 1562, 3.      






In 1605, 3 (seal m.), small curved marks hardly distinguishable from , are used to fill in vacant spaces about the signs. In 1604, 2 (f.), 1605, 5 (l.), 1605, 6 (j.), 1605, 7 (h.), 1605, 8 (e.), 1605, 9 (g.) an  is used either as a title or as a mere mark of separation. In 1605, 2 (p.), the  which is between the seated figure and the offering stand has apparently been crowded in afterwards, and cannot therefore be a mere separation mark, but is on the contrary a necessary part of the name or the title. In 1605, 5 (l.) there are besides the similar marks below  and above .

<sup>1</sup> The  is between  and  and is perhaps to be read with both the preceeding and the succeeding groups of signs.



which seem to me mere filling marks.<sup>1</sup> N. 1605, 9 (g.) and 1605, 7 (h.) seem to give us a title <sup>2</sup> or  <sup>3</sup> which may be read *hntj-mw* (cf. Griffith Hieroglyphs, p. 30 Fig. 6, possibly "Overseer of the water" (?).

In 1605, 9 (g.), 1605, 8 (e.) and 1605, 5 (l.) are titles  or  and  or  which instantly remind us of the  occurring as a title (*R. T.*, seals 16, 17, 134, etc.: stelae 20, 24, 26, 27, 137, 139, etc.). But our sign is quite clear (cf. also *Hierakonpolis* LXXI 44) and appears to be a bird (?) with the head and horns of an ibex (cf. figure of an ibex with head turned around *Origines* II fig. 864). See also Pl. 44, seals y and z.

In 1605, 1-4, there is a group of very similar titles all containing the words  *sntj* ground plan (or architect?) and ,  or , and .

Nine seals  
from one  
tomb.

The fact that nine of these seals were found in one tomb (1605) and that these belong in the main to different people, might be taken to indicate that these cylinders were prepared especially to be placed in the grave<sup>4</sup>. But most of these bear distinct marks of long and constant use (Pl. 44 below). It is therefore more probable that they were either marks of authority delegated by others to the person buried in the tomb or marks of authority given by him to different members of his family and relinquished on his death.










## 2. Potmarks.


The potmarks occur on pots of type I, III and XXIX. They are drawn in Fig. 165, 166 and 186, and references are given there to similar names found at Abydos. These form another link between our cemeteries and the contemporaneous royal tombs.

## 3. Writing.

Writing  
from  
private  
graves.

In each of two predynastic graves, one at Ballâs and one at Naga-ed-Dêr, our expedition found a white cylinder-seal. The inscription in one case showed three fish and a building (cf. A. Z. xxxiv 160), and in the other three birds; but these inscriptions indicate in any case only a very primitive form of writing. The potmarks and cylinders from the tombs in our two cemeteries give us the same system of writing practically which we find in the same period at Abydos. These are the earliest *private* graves in which we have found such a system of writing. In fact I believe that they are the earliest *private* graves outside the

<sup>1</sup> If  is a title or an ideogram, the question arises whether it may not be read *s* or *s3* "man" later written  *s* or *s3*. In this case *s* or *s3* "man" would be distinguished from *s3* "son" in the earliest period. The proper names in which  seems to occur as an ideogram are  *s3-t-Anubis* (Woman (?) of Anubis, stela I R. T. xxxii 17);  *s3-n-Chnum* (Man of Chnum, II R. T. stela 62);  *s3-ntr* (stela I R. T. xxxii 8; and possibly in  (seal 30);  (stela 8);  (seal 24, 134).

<sup>2</sup> The four bars II R. T., seal 143, and 129 seem by 142 to be connected with the , cf. 193 and 202.

<sup>3</sup> It seems that we have here  = *mw* and  = *n* written differently.

<sup>4</sup> See I Abydos, p. 23 § 22 to LI, 12.



tombs subsidiary to the royal tombs in which writing has ever been found. It is therefore extremely interesting to see that the system is the same as that at Abydos, that in writing as in the case of tomb construction, improvements and inventions are first made for the use of the great and spread downwards. And it is especially significant to see writing in its spread among private people used for the practical necessities of life — marks of ownership and symbols of authority. This was at a time only 50 or 100 years after the first known use of writing, when it was still in a stage not far from an ideographic system.

It has often been urged that writing was not an Egyptian invention or that it was brought into Egypt by the so-called Pharaonic Egyptians in a comparatively perfect state. But an investigation of the known facts does not bear out either conclusion. On the contrary a comparison of the earliest writing with the pictures and reliefs of the predynastic period shows plainly enough that hieroglyphic writing is an Egyptian invention and that the dynastic people inherited writing from their racial forebears of the predynastic period.

First of all, the negative argument must be considered that no one has been able to point to any known system of writing of equal age from which the hieroglyphic system may have been derived. The theories which have brought us tales of the wanderings of people of Punt or of Lybians lack any basis of known fact and involve us in the still greater mystery of how the Egyptians got writing from a people who have themselves left us no trace of writing. De Morgan has suggested Babylonia as a possible source of hieroglyphic writing. And although that suggestion has not, I believe, met with any serious support, it will be well to state briefly here the chief facts which make it impossible of acceptance. Whether we take Nabonidus' date for Naram-Sin or reject it<sup>1</sup>, the system of writing used in Babylonia at the time of Menes, 3300 B C  $\pm$  100<sup>2</sup>, was in *language, character and form of signs* absolutely different from the Egyptian system. Taking those signs which can be identified and for which we have the early equivalents in both systems, such as sun, star, earth, mountain, city, house, door, wood, king, man, woman, hand, face, head, mouth, heart, fist, then we find first that the Egyptian signs are real pictures of the objects represented while the Sumerian conventionalizations would hardly have been recognized if the signification were unknown and second that the most conventionalized Egyptian signs (city, house) differ essentially from the corresponding Sumerian signs. It is quite inconceivable that the more primitive Egyptian writing could have been taken *directly* from the Babylonian. If, however, it is suggested that the Egyptian writing came indirectly from some ancestor of the Babylonian system or came from some unknown system, then the whole question becomes speculative. We have no adequate basis of facts which would justify any conclusion whatever. There is nothing known outside Egypt which even encourages us, much less *forces* us, to seek a foreign origin for the hieroglyphic system.

On the other hand an examination of the material presented to us in Egypt itself shows that the appearance of a system of writing is not so unusually sudden nor is the system itself

<sup>1</sup> Personally I agree with Lehmann's conclusions on this point in *Zwei Hauptprobleme der babylonischen Chronologie*.






<sup>2</sup> MEYER, *Ägyptische Chronologie*, p. 178. It is unnecessary to point out that the adherents of an older date have been unable to answer Meyer's argument.



as used in the earliest inscriptions in anything like the perfection it reached in the Old Kingdom. We must consider the phenomena which attend the introduction of other inventions and new arts which are unmistakeably Egyptian. — stone vessels made with the shaft-borer, copper implements, wheel-made pottery, or even brick vaults and stone buildings. In every case, the earliest examples ever found show the art in a practical useful form, in a certain condition of perfection though not necessarily the height of perfection.

The objects placed in the grave were those which were considered useful to the man in the future life. Aside from the objects which as a matter of tradition were so regarded, the objects useful in the future life were those useful in the life on earth; and the traditional objects were themselves objects or models of objects which had once been in common use. In fact all the things found in the graves appear, in the earliest times at least, to be objects actually used in the daily life. It is quite evident that products of new arts would not appear in the graves until they were in common use, until they were part of the daily life of certain individuals, — an essential part of their household goods. It is inconceivable that any but the products of a comparatively perfected art could assume this place in the daily life and so find a place in the grave. Therefore, however primitive the first examples of writing found in tombs may be, they will certainly show a complete system fulfilling the uses to which writing was then put. And it becomes a mere matter of chance whether in the fragments preserved to us we have the very first inscriptions ever placed in a tomb or something almost equally early.

Ideographic  
character  
of  
earliest  
hieroglyphic  
system.

It is generally agreed that the hieroglyphic writing of the first dynasty is a very primitive system — a very near approach to an ideographic writing. An examination of the inscriptions meagre as they are, shows that the hieroglyphic writing of the inscriptions of the "Scorpion", the Horus Ka, Menes and Weha'-mer appear to be rather more primitive than those of the kings Zer, Zet and their successors. Sethe has already pointed out<sup>1</sup> that there is a rapid advance in the *forms* of the hieroglyphs during the first dynasty; and he has noted a very important difference between the form of the hawk in the inscriptions of King Weha'-mer and that in the inscriptions of Zet, and other differences between the signs ,  and  of the inscriptions of Zer and Zet and those of their successors. He has also shown<sup>2</sup> that even in the period of Wedy-mu (Den) such common alphabetic signs as  = *d* and  = *n* were used as ideograms in the Horus-names, in the writing of which the Egyptians held to the ideographic principle down to the end of the Old Kingdom<sup>3</sup>. A consideration of the cylinder seals shows the same rapid advance from the seals of Menes through the seals of Zer and Zt to those of Wedy-mu (Den), Qaïy-a' (*Kj-c*) and Perabsen<sup>4</sup> (*Pr-ib-sn*).

It is therefore clear that we have in the time of Menes a system of writing still primitive, — in fact practically ideographic in character, — and that this system developed rapidly especially during the first dynasty. This means that we have in the time of Menes a very early stage in the invention of writing, that writing had not been long in use. It is doubtful

<sup>1</sup> Beiträge, p. 23 § 1.

<sup>2</sup> Beiträge, p. 39.

<sup>3</sup> It seems to me that this persistence of ideographic writing in the Horus name of the king indicates that the writing of this name was one of the earliest uses to which writing was put.













<sup>4</sup> See Petrie *II R. T.* p. 3 § 3.



unless we find the tombs of local kings of the district in which writing was actually invented whether we shall ever get any more primitive form than we have already. But in spite of this, there is sufficient material to show that the basis for the invention can be found in the picture drawings of the predynastic period, sufficient material to suggest even some of the steps in the invention of the system. We have a continuous material from the earliest predynastic times down to Menes which shows that the predynastic Egyptians possessed a certain facility in drawing symbols of the gods, figures of men, boats, animals, plants and conventional designs, and a very true skill in cutting animal figures in double relief on slate palettes. The skill which was used in making the pictures on the Menes and Weha-mer tablets and slates is a manifest outgrowth of this earlier handiwork<sup>1</sup> and produces representations which are indubitably the lineal descendants of the earlier pictures,—for example the symbols of the gods, the figures of men, boats, and animals. For example, compare the symbols:

## Predynastic form.

## Protodynastic form.

			N. LXVI 5, 8, 10 with		Hierakonpolis xxvi <sup>e</sup>				
	or		N. LXVI 6	„		„	„		Origines II Pl. II
			Diospolis xvi 41 <sup>b</sup>	„		„	„		
			N. LXVI 5	„		„	„		II Abydos III <sup>A</sup>

See also the symbols:<sup>2</sup>

## Predynastic.

## Protodynastic.

	N. LXVII 14		Hierakonpolis xxix
	N. LXVII 9		Hierakonpolis xxvi <sup>c</sup>

These early symbols used to designate different gods are undoubtedly pictures of objects used to represent the gods themselves; and *this use of these pictures is plainly a primitive form of ideographic writing*. Given then this skill in picturing objects which we have seen in the earliest period, given this suggestion of ideographic symbols in the middle predynastic, the step to representing all things by pictures was not a difficult one.

We imagine the great men making symbols for themselves “The Scorpion”, “the Fighter” — and for their palaces and estates.

Then the need for marks of ownership, the lack of which is expressed in the private marks on pottery, the need for conveying authority from the head man to his subordinates, the necessity of marking the indistinguishable equal years by the great deeds, the great events of the king's life — all these dire wants brought the system of writing quickly forward to the completed state of the time of Menes. The early examples of writing which we have, serve no other purpose but the satisfaction of these very needs. Like all other new arts,

<sup>1</sup> The cursive character of the earliest writing is part of this inheritance. The difference between the line drawing and the relief work is due mainly to the difference of the material, and forms probably the beginning of the separation between the cursive or hieratic, and the formal or hieroglyphic, script.

<sup>2</sup> See also Foucart's identification of the predynastic symbols with the gods of the dynastic period in “Comptes rendus des séances de l'Académie des Inscriptions et Belles Lettres”, 1905, p. 257.



writing was invented for those who wanted it and could pay for it — the chiefs and kings<sup>1</sup>. It is not found in the use of common people until the time of Zet. To me it is quite clear that little has been lost to us of the steps in the invention of the hieroglyphic writing. For the first time, we see the growth of a system of writing, and the conditions and the motives which accompanied it. It is conditioned by a skill, won we know not how in some early stone age, but always used in the service of the practical needs of life and in that service built up into a useful system of writing.

## XVI. SUMMARY.

In the preceeding chapters, the construction of the different types of tombs found in cem. 1500 and 3000, the types of pottery, stone vessels, flints, copper blades and other objects found in the tombs, have been described; and now this whole material must be held in view in order to fix those characteristic marks which distinguish this set of objects from the objects of the predynastic period on the one hand and from those of the third and following dynasties on the other<sup>2</sup>. Our knowledge extends to a point perhaps a thousand years before the second dynasty<sup>3</sup>. When we look back to this early predynastic period and compare it with the period of our cemeteries, we find the clothed body still lying contracted on the left side head to the south. It is still accompanied by food and by carriers for food and drink, by vessels, implements and arms, by toilet articles and ornaments, — in a word by objects which cover apparently nearly the whole range of daily usage. The race has not changed in any visible essential its conception of life after death or the customs and practices due to the dead. But in the objects placed in the grave and in the construction of the grave itself, there are a series of remarkable differences based for the most part on changes in the technical powers of the race, — on the one side a great increase and on the other a diminution.

<sup>1</sup> See above, p. 11 § 5.

<sup>2</sup> Our expedition has excavated predynastic cemeteries at *Shurafa*, *Ballâs*, *El-Ahaiwah* and *Naga-ed-Dêr*. The chief publications on predynastic cemeteries are: PETRIE and QUIBELL, *Nagadah and Ballâs*; PETRIE, *Diospolis Parva*; MACIVER, *El-Amrah*. DE MORGAN's *Origines I* and *II* chapt. I—III, while it was of great importance at the time it was written, is entirely lacking in that exact description of individual tombs necessary to our present purpose. As for the third and fourth dynasties, we have cemeteries N. 500, N. 700, N. 3500, and the Gizeh cemeteries. The chief publications are: PETRIE, *Medum*; QUIBELL, *el-Kab*; GARSTANG *Mahasna and Bêt Khallâf* and *The Third Egyptian Dynasty*. For the cemeteries of the first two dynasties, the publications of excavations are: DE MORGAN, *Tombeau royale*; QUIBELL and GREEN, *Hierakonpolis*; PETRIE, *Royal Tombs I and II* and *Abydos I and II*; MACIVER, *el Amrah*.

<sup>3</sup> For the chronology of this early period see especially: SETHÉ, *Beiträge zur ältesten Geschichte Ägyptens*; and EDUARD MEYER, *Ägyptische Chronologie*. In regard to Meyer's conclusion that the Egyptian calender was introduced at the beginning of a Sothis period in the years 4241—4238 B. C., I may say that although accepting Meyer's date for Menes as ca. 3300 (+ 100) B. C. I find that the length of time indicated by the size of the predynastic cemeteries and by the changes introduced during the course of the burials cannot possibly carry us beyond 4500 for the earliest predynastic grave known. In fact, it is extremely doubtful if the earliest known grave is earlier than 4000 B. C. In any case, 4200 B. C. was a period of undoubted barbarism — the nearest approach to the neolithic which we have in Egypt; and it appears to me simply inconceivable that the Egyptian calender can have been introduced *formally* at that time. The other alternative which Meyer offers us is 2781—2778 B. C. Whether this date for the *formal* introduction of the calendar is really excluded by "historical facts" is a matter which I feel inclined to question. We intend to return to a consideration of this point in the publication on the predynastic period. MacIver (*el Amrah*, p. 50—52) independently has reached the same conclusion on the length of the predynastic period.



In order to show the extent of these differences, a comparison of the characteristics of the two periods is here arranged in parallel columns:

### PREDYNASTIC PERIOD.

1. Small graves: shallow, oval or nearly round pits with the body (contracted on left side, head south) protected by mats or skins; later small pits with recess-chamber.

*Diospolis* § 51-52: N. 7000:

*El-Amrah*, class 1 and 2.

*Naqadah-Ballâs*, Pl. 5, 82, 83.

Large graves: rectangular pits ca.  $4 \times 2$  m and  $1\frac{1}{2}$  meter deep, roofed with branches: body protected by mats or wooden frame.

N. 7000, el-Ahaiwah, Mesaïd:

*Diospolis* § 53 (R. 134):

*Naqadah-Ballâs*, Pl. 5, 82, 83.

*Hierakonpolis* II, § 52 Pl. 67.

2. Beautifully flaked flint knives, lances and fish-tail daggers.

*Diospolis*, Pl. 7:

*Naqadah-Ballâs*, Pl. 72-74:

*El-Amrah*, Pl. 7 and 10: Lythgoe B. and N.

3. Malachite, galena and haematite, used (as oxides etc.) to make green, white and red grease paints. In the *late* middle period,<sup>2</sup> copper dagger blades imitating flint forms (as noted by MacIver) have been found and perhaps a little later copper adzes (imitating stone forms) and chisels. All copper objects previous to the middle predynastic are rare, small and flimsy.

Dagger blades: *Naqadah* LXV 3; *el-Amrah* p. 20, a 131, p. 23, b 230.

Adzes: *Naqadah* LXV 5-6 (*Diospolis* VII u. 74 is nearly first dynasty).

### EARLY DYNASTIC PERIOD.

1. Small graves: lined with brickwork and roofed with branches, later roofed with corbel vault.<sup>1</sup> Recess-burials occur under boulders. Body contracted on left side, head south.

*Comparison between the predynastic and the early dynastic graves.*

N. 1500, N. 3000: R. T. I § 8 etc.:

Abydos I § 18 ff.: el-Amrah, class 6-8.

Large graves: rectangular, ca.  $8 \times 4$  meters and 3 meters deep (or larger): mud-brick substructure roofed with double roofs of logs and bricks, later with corbel vaults; multiple chambers, stairways, doorways.

N. 1500, N. 3000: R. T. I and II.

2. Poorly flaked broad knives, handled knives, complicated arrow and lance forms, and animal forms. Abundance of worked flint chips rectangular and pointed.

*Flint knives.*

N. 1581, 1514, 1586. II R. T. Pl. 4, 6:

*Abydos* I Pl. 14, 15:

*Hierakonpolis* II Pl. 60, 61.

*Origines* II p. 200-201.

3. Heavy practical axe-heads, adzes, chisels, knives, daggers, spears, implements and ornaments.

*Copper.*

Axe-heads: N. 1513; II R. T. XLV 21, 76:

I *Abydos* L: *Mahasna* XVI 21: *Diospolis* VII u. 74.

Adzes (imitation stone axe heads): N. 1513:

II R. T. XLV 77: *Mahasna* XVI 3-4.

Harpoons: II R. T. XXXV 92.

Chisels: N. 1513: II R. T. XXXV 90-91;

XXXVIII 94; XLI 85-93; XLII 74; XLV 65 to 75: I *Abydos* L; *Mahasna* XVI.

<sup>1</sup> Hierakonpolis, p. 26 describes similar tombs with stone slab roof. These must be second or third dynasty; but the description of contents is not sufficient to settle the question. See L. c. Pl. 71, bottom.

<sup>2</sup> In any case, there is very little difference in time between the late middle predynastic and the late predynastic.



Harpoon (copies of bone forms): *Naqadah* LXV 7-8.

Chisels: *Naqadah* LXV 9-14 also tombs 807 and 1233.

Tweezers: *el-Amrah* p. 23, a 104.

Pin: *Naqadah* tomb 1821: *el-Amrah* p. 18, a 139.

Needles (cf. bone forms): *Naqadah* LXV 3: *el-Amrah* p. 16, a 117; p. 21, b 65.

Bracelets (like bone and shell forms): *Naqadah* tomb 1248: *el-Amrah* p. 20, b 62; p. 21, b 210.

Rings: *el-Amrah* p. 16, a 67; p. 18, b 28.

Cf. *Diospolis* p. 24-25. Our expedition has never found any copper implements previous to the late predynastic at el-Ahaiwah, Ballâs or Naga-ed-Dêr. None were found in the main deposit at Hierakonpolis.

Common  
pottery.

4. Common pottery, carriers of grain, liquids, fats, ashes and mud (mortar?). Skilfully made by hand; but as a rule of poorer, cheaper (i. e. more easily obtained) material than the pottery vessels. In the later period, the best forms are of a hard-burnt, fine-grained drab ware.

Cf. *Naqadah* pottery W. R. and L.

Fine  
pottery.

5. Fine pottery vessels: red polished ware often in fancy forms (*Naqadah* class P and F); decorated ware of the white line type (*Naqadah* class C), the red line type (*Naqadah* class D) and the black incised type (*Naqadah* class N); red polished ware with black tops (*Naqadah* class B). The white line type appears to occur only in the early period; the black incised is very rare; the others continue down to the late period. In the late period, they all become infrequent. About the begin-

Knives: *II R. T.* XLV 78-80; *I Abydos* L; *Mahasna* XVI.

Tweezers: *II R. T.* XLIII 15.

Fish-hooks: *II R. T.* XLV 19-20; *I Abydos* LI.

Pins (?): *II R. T.* XXXV 93-95; XXXVIII 92; XLIII 17; XLIV 47-49.

Nails: *II R. T.* XLIII 16.

Needles: *II R. T.* XXXV 84-89; XXXVIII 93; XLIII 13, 14; XLV 18.

Bracelets: N. 1532; N. 1571.

Shells with green paint and malachite in 3-4 dynasty at El-Kab (especially p. II no. 174 stone roof, head north). See copper models, *el-Kab* XVIII 56-65 (Sneferu).

4. Common pottery, carriers of grain, liquids, fats, ashes and mud-mortar. Most forms can be traced directly to predynastic forms. They are still hand made and useable pots (see especially types I-VII above): but there is a distinct degeneration in technique. As these were cheap pots from the beginning, the degeneration is not so marked as in § 5.

See above p. 89. Cf. *el-Amrah* p. 47-48.

5. A few red polished forms occur but not so well made as the older types (see above types X-XIV, XXIII-XXVI: *I Abydos* XXXVI to XLI, marked P). Four examples of black topped red polished pottery (B) are recorded: see *el-Amrah* Pl. 14 B 2 b, thin from a corbel vault, b 96, of the second dynasty; *I Abydos* Pl. 6 9-10 from the tomb of Zer and the Zer-subsidary tomb no. 23, of the first dynasty; and *Tombeau royal* p. 162 fig. 566. The best pottery forms are the red polished (XI-XIII, XXI, XXXIII, XXVI)

ning of the first dynasty, the red line decoration degenerates into series of wavy lines and even into parallel splashes like rows of commas.

Cf. *Naqadah*, types P. F. C. D. N and B. See *Diospolis* Pl. 2 and *el-Amrah* Pl. 14, 15 (note the interesting late middle predynastic group on Pl. 8 b 62).

6. Stone vessels are extremely rare in the early, predynastic period.<sup>1</sup> They are for the most part *small hand-bored* vessels,—jars with handles (*Naqadah* Pl. 8-9, H 1-74), small irregular cylindrical jars (*Naqadah* S 3, 4<sup>a, b, c</sup>, 6, 7, 8 but not with cord line about the neck), small rimless cups and bowls (*Naqadah* S 44-47), and some jars in animal form (*Naqadah* S 80-84). The material is usually basalt, alabaster, limestone and brecchia. In the late middle and late period these jars increase in size and numbers but were never numerous (cf. *Naqadah* p. 10 § 19).

See also *Diospolis* ix.

7. Slate paint palettes with marks of green and red paint. The forms are rhomboid, hawk, gazelle, turtle, fish, lion, hippotamus and jackall,—the animal forms are those which occur later in amulets. In the late predynastic, the prevailing forms are

and the hard red types (xiv, xviii-xxii, xxvii-xxviii). On the whole we may say that we find in the first two dynasties only degenerate remnants of the fine pottery vessels of the predynastic period.

Cf. *El-Amrah* p. 47-48.

6. Stone vessels are very abundant even in small poor tombs (cf. 3015, 3053 etc.). They are apparently bored with the stone-borer on a shaft (cf. stone borers *II Hierakonpolis* LXII and *I Abydos* LIII 23-34). They present a great variety of forms (see above chapter xi), some of them very large (see *II Origines* fig. 822-3), and some of exquisite workmanship (see *II Origines* fig. 664-5); but many of the forms can be traced directly to the pottery forms of the predynastic period (types S 1-x, xiv, xvii to xxi, xxv, xxvi). Types xi, xx<sup>d</sup> 7-15, xxiii and xxiv are descended from predynastic stone forms. Types xii, xiii, xv, xvi, xxii are new types having their origin in the new skill applied to the hard material. The materials are slate, alabaster, volcanic ash and limestone in the common graves, porphyry, crystal and syenite in addition in the royal tombs.

See in addition to our two cemeteries, Petrie's cemetery M., *I Abydos* Pl. 36-49.

7. Large ornamental slate palettes, resembling the double bird type, with small spot in center for rubbing paint.<sup>2</sup> The rest of the palette is covered with elaborate reliefs referring to the king, to national events, or to hunting (?) scenes. Only two of

Stone  
vessels.

Slate  
palettes.

<sup>1</sup> Occuring with white line decorated ware: *Naqadah* p. 29 1676; *el-Amrah* p. 15, b 144 (H 72); *Lythgoe* N. 7014, 4 like S 7 without a rim, alabaster; *Lythgoe* N. 7128, 1 like H 62, alabaster; *Lythgoe* N. 7016, surface, like H 71, basalt.

<sup>2</sup> See QUIBELL's exposition *II Hierakonpolis* p. 41. Pl. 29.





rhomboid, square and round with simple borders in incised lines.

See *Naqadah* Pl. 47—48.

these have been found by a European — both by QUIBELL in the temple at *Hierakonpolis*. They are in any case intended for purely ceremonial purposes. In the early first dynasty graves of Cemetery M at Abydos and in the Menes tomb, there were also slate palettes like those of the late predynastic period.

See *I Hierakonpolis* xxix and *II Hierakonpolis* xxviii: *II Origines*, Pl. 2, 3 and p. 265. A comparison with the ivory carvings seems to show that the smaller Hierakonpolis palette is slightly older than the other — i. e. time of Menes or a little older. The latest slate palette I know is 3 dynasty, *el-Kab*, p. 8, stairway tomb No. 6.

Mace  
heads.

8. Mace heads of hard stone of three forms,— splay or disc form, bulbous form and spindle form. 

Practical striking weapons with some painted limestone models.

See *Diospolis*, p. 33<sup>b</sup>, 86, Pl. 5 one with horn shaft and one with ivory shaft: *Naqadah*, xvii, 1—25: *el-Amrah*, Pl. 10, 6: and *II Hierakonpolis*, xxvii.

8. Large ornamental bulbous mace heads with delicate reliefs referring to the king and to national events. Found as yet only in the temple site at Hierakonpolis. Purely ceremonial. Other bulbous mace-heads also occur. The splay form has never been found except at Hierakonpolis where they may be predynastic. The ornamented splay mace-head, *II Hierakonpolis*, xxiii, is however significant.

*I Hierakonpolis*, xii, 4, xxv, xviii, 17, xix, 3, xxvi, a—c:

*II Hierakonpolis*, xxiii, xlvii<sup>a</sup>:

*II R. T.*, xxviii, 69; xxxviii, 85—87; xli, 95: *Reqaqnah*, Pl. 7: see also figures of king on the *Wh3-mr* (?) slate and on the fragment *I R. T.* x, 14.

Toilet  
articles.

9. Combs, hairpins, and bracelets of ivory; bracelets of shell; beads and amulets of carnelian, blue glazed stone, fayence, etc.; amulet-like objects of ivory, etc.

9. Combs, hairpins, bracelets, beads and amulets of nearly the same form and the same materials as in the predynastic period. Bracelets of slate, flint and crystal. Long cylindrical beads of soft black or white stone bored with a copper drill.

Combs and hair pins: *Naqadah*, LXIII, LXIV: *el-Amrah*, VIII, 4 and XII, 2, 3, 8; *Diospolis*, IX, 21—25; X, 1—12.

Beads and amulets: *Naqadah*, LVIII (date of Q 23, Q 709?)—LXII: *Diospolis*, x, 15—29, XI, 2—3; XII, 35—42: *II Hierakonpolis*, LXIV, 5 etc. On the manner of working beads see *Naqadah*, p. 44, § 65 and *II Hierakonpolis*, p. 11, § 31, — i. e. chipped into small bits or flakes, bored with a minute flint point, rubbed into disc, barrel or spherical form on a block of sandstone and polished (on hard stone? or leather?).

10. Woven mats, finely and coarsely woven cloth, skins. Pouches for clothing the male pudenda.

The best material on these points comes from our cemetery N 7000, excavated by Lythgoe.  
*el-Amrah*, p. 30.

11. No writing but line-painting and relief and seal cylinders containing the basis for the system of writing which is found in the first dynasty.

Earliest period: animal groups etc. in line drawing on white-line red-polished pottery (Petrie's class C.): see *Naqadah*, XXIX, 91—98: *Diospolis*, XIV, 93b: *el-Amrah*, XV, 17 (especially interesting), 21: *I Origines*, Pl. 2, 1, 4, 5: 3, 1—3.

Combs and hairpins: *II R. T.*, III, 20; XXXVIII, 8; *II Origines*, Fig. 758—759; N. 579 (4<sup>th</sup> dynasty): *el-Kab*, p. 6, no. 312, 185; p. 8 no. stairway 6; p. 10, no. 178; Pl. 27, nos. 166, 170; all of the 3—4 dynasty:

Bracelets: *II R. T.*, XXXV, 24—72; XLV, 7—17, 37—40; *II Abydos*, VIII, 144—152: *II Origines*, Fig. 733—743: *el-Kab*, p. 6, no. 312; p. 10, no. 138; pl. XXVII, no. 179: *Diospolis*, p. 36, u. 354.

Beads: *II R. T.*, XXXIII, 16—23 (cem. M.). XXXVIII, 9—29 (cem. W.), XLII, 79—81 (*Den-Wd3-mw*), XLIV, 40—43 (*Qa = K<sup>c</sup>j-c*): *I Abydos*, LII (cem. M.): *II Abydos*, VIII, 153—161: *II Origines*, Fig. 721—731, 744.

Amulets: *II R. T.*, XXXV, 81:

*I Abydos*, LI, 1—9; LII, 6—11:

*II Abydos*, VI—VII, 50—132:

*I Hierakonpolis*, XVIII—XXIII, XXII, 1 and 4.

10. Woven mats, finely and coarsely woven *Weaving.* cloth. Skins are not found in graves; but leopard skins continue to be used as ceremonial dress. The statuettes still show the pouch for the pudenda.

See ivory figures,  
*Hierakonpolis* VIII and x; slate palettes  
*Hierakonpolis* XXIX and  
*II Origines* II, p. 252.


11. A well developed system of nearly pure *Painting* ideographic writing which developed in a *reliefs and writing.* short time to a system of ideographic-phonetic writing.

Period before Menes: see late period in the opposite column.

Menes: QUIBELL, *Catalogue* No. 14142: *II R. T.* III, 1—20, IV, 1—20, XIV, 97—104: *II Origines*, Fig. 522—561: possibly also the slate palettes, *II Origines*, Pl. 2, 3 and Fig. 864,

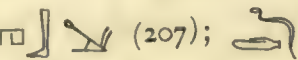




Middle period: scenes from life, men, animals, birds, plants, star, boats, with *insignia of the gods* in line drawing on red-line decorated pottery (Petrie's D) and in painting in the Hierakonpolis Tomb found by Green: See *Naqadah* xxxiv 36<sup>a-d</sup>, 37, 40, 41, 43, 45, 47, 50-55; 78, 80: *Diospolis* xvi: *El-Amrah* xiv: *I Origines* Pl. v 2, vi 5, vii 4, viii, ix 2, 3, x. See also pottery box with charcoal drawings, *El-Amrah* xii, p. 16 tomb a 41; Green's tomb *II Hierakonpolis* lxxv—lxxviii; and seal-cylinders Lythgoe N. 7304 and *A.Z.* xxxiv 160 (from *II R. T.* x), cf. *II R. T.* xvi 116.

Late Period: a seal-cylinder Lythgoe Bállas — (birds etc. on a reused cylinder with traces of an older inscription like N. 7304): probably the reliefs on the limestone jar of  *Hierakonpolis* xiv<sup>1</sup>; the line drawings of the so-called Ka-Ap king *II Abydos* i, ii: and possibly the carved ivory and small slate palette represented *Hierakonpolis* xii—xvii, xxviii and the gold handle on the flint knife in the Gizeh Museum, QUIBBEL, *Catalogue* 14265.

and the clay cylinder l. c. Fig. 857: QUIBBEL, *Catalogue* No. 14238 bis: painted pot *I Abydos* L. See also *II R. T.* ii, 2, 6, 7, 13—15.

Weha 3-mer (Nar-mer): *II R. T.*, ii, 3—5, xiii, 91—94: *Hierakonpolis*, xxvi B and perhaps C (ivory maceheads), xxiv slate palette.

With *Zer*, *Zet* etc., there is a rapid change in the form of certain hieroglyphs and the application of phonetic values to certain signs becomes more marked. See finally the seals of Khasekhemui *II R. T.* xxiv where words seem to be spelled out with determinative:  (207);  (210);  (214).

See *I R. T.* i—xxxvi; *II R. T.* i—xxxii; Sethe, *Beiträge*, p. 39—41, p. 61—64; *I Abydos* i—v, xi—xiii: *II Abydos* v 31—33, 36; x 216; xii 274—279; xvi.

*Continuation of the old arts.* It is clear from the above comparison that the old arts of flint chipping, hand manufacture of pottery, mat and cloth weaving, bead boring and rubbing continued to be practised in the early dynastic period; and many of their products can be traced directly in technique and form as products of continuous manufacture down from the oldest known products of these arts.

But it is equally clear that the handicrafts in which the predynastic Egyptians excelled the dynastic Egyptians were the hand manufacture of pottery and of flint implements. The dynastic products of these crafts are distinctly inferior and show a marked degeneration in the skill of the workers<sup>2</sup>. On the other hand, the dynastic Egyptians excelled in the manufacture of stone vessels, in the possession of copper implements which appear to have been introduced in the late predynastic period and in the use of writing. But it was something more than merely excelling on the one side or the other. For the fine hand-made pottery vessels of the predynastic period have been actually replaced in the early dynasties by the

*Products of certain old arts replaced by products of new arts.*

<sup>1</sup> See MEYER A. G. p. 132, note 2.

<sup>2</sup> See DE MORGAN, *Tombeau royal*, p. 201 (speaking of flints): "Dans tous les cas, les instruments d'époque pharaonique sont bien inférieurs, comme travail, à ceux des indigènes; les éclats sont levés avec beaucoup moins de régularité, et bien que les pièces soient fort grandes, il est aisé, en les voyant, de prévoir la fin de l'usage de la pierre taillée en Égypte."



more permanent and practical stone vessels; and with the death of the old artisans the craft was confined to the manufacture of cheap pottery for the most common uses or for temporary ceremonial or traditional purposes. It is even probable that through lack of practice the Egyptian potter was no longer able to make those fine forms which distinguish the predynastic pottery.<sup>1</sup> So also the flint implements have been replaced in daily use by copper implements except for the most common uses or for ceremonial purposes; and the fine ripple-flaking of the predynastic period has become a lost art. The dynastic Egyptian had acquired two new useful arts — the manufacture of copper implements and the use of the stone borer on a shaft; and the products of these arts serving the same purpose as the products of the old arts of flint-making and pot-making by hand have been found more useful and cheaper in the long run. They have therefore driven out the products of the old arts for household use. The old arts ceased to be practised continually for general use and degenerated, and in the degenerated form only continued to be practised for the manufacture of very cheap objects or of objects for traditional-ceremonial purposes.

Thus the graves of the early dynasties contain products of arts — copper working, use of copper tools, stone boring and writing — which are never found in the graves of the *early* predynastic period and but seldom in the graves of the late predynastic period. But the products of the older arts of flint chipping, hand manufacture of pottery, mat and cloth weaving still occur, often imitating the older forms or directly traceable to them.

This fact enables us to separate the objects found in this period into two distinct classes, — *useful objects and traditional-ceremonial objects*. The *useful objects* comprise the products of the new arts which on account of their practicality have replaced the finer products of the old arts in the daily life (stone vessels, copper implements and weapons, and inscriptions), and also the products of old arts for which no better substitute has been found (mats, cloth, seal cylinders, beads and ornaments). These objects were certainly those used in daily life by the occupant of the grave or such of them as the relatives felt bound by filial piety to place in the grave. The *traditional-ceremonial objects* comprise the implements and the vessels of ceremonies still kept up by tradition, — certain types of pottery (types xxix<sup>2</sup>, II, III, v<sup>3</sup>, x etc.), flint knives, ornamental slates (found as yet only in temples) and ornamental mace heads (found as yet only in temples). Such of these as depend on the old arts of flint chipping and hand manufacture of pottery, show a distinct degeneration of technique. On the other hand those ceremonial objects (mace heads and slate palettes) which could call to their assistance the copper chisel, the new skill in working stone surfaces and the knowledge of writing, show a degree of elaboration which made them absolutely impractical for anything but ceremonial use.

The ceremonial objects of one period are the useful objects of some past period whose usefulness has been lost. Just as the machine-made stone vessels of the early dynasties drove out and destroyed the art of making hand-made pots, so we find in the third and fourth

<sup>1</sup> For the conditions under which pottery, stone vessels, etc., were manufactured, see Green, II Hierakonpolis p. 17 § 44 and cf. the family factories of the present day described by MacIver. *Journal of the Anthropological Institute* xxxv, 1905.

<sup>2</sup> Used probably in making the traditional *ḥ3*-bread as a funerary offering. Used for bringing mud and mortar to plaster and seal the grave.

<sup>3</sup> Carriers of grain and liquids. Still profitably made of pottery on account of its size.



dynasties the wheel-made pots driving out stone vessels for ordinary purposes. And just as the old hand-made pots continued to be made for use in the graves as a matter of tradition, so in the fourth dynasty stone vessels continued to be made for use in the graves of that period. In other words, looked at from the point of development on technical and mechanical lines, the fourth dynasty bears very much the same relation to the earlier dynasties as the earlier dynasties bear to the predynastic period. This is a question which will be taken up more at length in the volumes dealing with the royal cemeteries at Gizeh.

Now it must be remembered that these two classes of objects — the useful objects of the new arts and the impractical objects whose descent from the products of the old arts can be traced — *these two classes of objects occur side by side in the same graves* (N. 1513 etc.).

The Egyptian race and civilization continuous from the earliest predynastic period. The people who practised the new arts still clung to the traditions ceremonies and arts of the people of the earlier graves, as only lineal descendents are capable of doing. In another place the anatomical evidence of this lineal descent will be presented by Prof. ELLIOT SMITH. That evidence, we believe to be perfectly conclusive. But for the present, from the archaeological evidence alone, I think it is clear that the differences between the people of the predynastic graves and those of the early dynasties depend on two mechanical inventions — stone boring and writing — and on the spread of a third invention — copper-working which was made in the middle of the predynastic period. All three of these inventions are so closely related that we may say that the invention of copper-working made the other two practicable. As we have seen above (p. 113—115) copper weapons, which satisfy the keenest need of primitive man, was the first result of the invention of copper-working. The possession of copper weapons undoubtedly gave the courage necessary to a wider range of tribal action, opened new fields for obtaining wood, metal and stone, and tended, in fact finally led directly to the concentration of political power and wealth under the first kings of Upper and Lower Egypt. Under this impetus, the invention of copper implements for working the new materials soon followed. Copper implements facilitated the cutting of proper blocks of stone for stone vessels, and by thus cheapening the material probably led to an increase in the practice of stone boring and so encouraged, if I may say so, the invention of a better borer — the crank and shaft borer, perhaps the *first machine<sup>1</sup> ever invented by man*. In like manner, copper implements would make easier the earlier stages in cutting in relief such scenes as we see on the painted pots and prepare the skill necessary for cutting inscriptions. Thus it was the invention of copper which gave the first great impetus to the race, the necessary courage, all the conditions which would make for development. And it is not necessary to seek this invention of copper-working outside Egypt. The Egyptians had known copper ore from the earliest known period; they had begun to work it into ornaments perhaps in the middle predynastic; and they were in possession of practical copper weapons by the end of the middle predynastic at a time when no one has yet ventured to suggest a foreign invasion. The invention of copper working is Egyptian; the invention of the stone borer is Egyptian; and the invention of the hieroglyphic system of writing is Egyptian.

<sup>1</sup> In the shaft borer, the power applied by hand to a crank was transmitted by a shaft to a boring stone. All other known early implements including Egyptian mills, were used directly in the hand as tools.

The very products of these inventions copy in stone and copper, the flint, bone and pottery products and the pictures and forms of the old arts. Even the great ceremonial maces and slates of the dynastic rulers of Egypt are more closely bound up than anything else with the past as we see it in Egypt of the predynastic period. It is, I believe, impossible to escape the conclusion that the inhabitants of Egypt from the earliest predynastic period down to the end of the protodynastic period, form one continuous race and that we are here witnesses of the steps by which they conquered the stubborn materials of the earth and earned that civilization which we call Egyptian.







## APPENDIX.

### The Basis for dating Tombs of the III and IV Dynasties.

I have constantly referred to certain tombs in the publications of *El-Amrah*, *Naqadah*, *El-Kab*, and *The Third Egyptian Dynasty*, and have assigned to them a different date to that given in the respective publications. The basis of this new dating is, for the most part, the following scheme of the development of tomb types, or rather substructure types in *large* tombs:

Wood-roofed brick substructures, without stairway ... = Dynasty I (first half).  
 " " " " with " ... = " II (second half).  
 Corbel-vaulted " " " " ... = " II.  
 Deep subterranean chambers reached by a stairway from  
 the North ... .. = " III.  
 Deep subterranean chambers reached by a straight  
 square shaft . . . . . = " IV. (including Sneferu).

The types of objects occurring with each of these substructure types form characteristic groups. By comparing the small tombs and their contents with the classification of the large tombs and their characteristic groups of objects, the small tombs are dated as follows:

Wood-roofed mud-brick wells ... .. = Dynasty I and Early II.  
 Corbel-roofed " " " with entrance .. . . . = " II.  
 Stone-roofed " " " ... .. = " II and III.  
 Corbel-roofed " " " without entrance ... . = " IV.  
 Square pits with recess chamber . . . . . = " IV.  
 Roughly vaulted mud-brick wells ... .. = " IV.

Dating according to this classification, which will be dealt with at length in *Naga-ed-Dêr* II and III, and controlling the date by the burial and the other contents of the tombs, there will always be of course a certain range for the date of most individual tombs, but it is a range of only half a dynasty or so for tombs which have been fully recorded.

For convenience sake, the following arrangement will give my conclusions on the dates of the tombs in the publications referred to above:

#### EL-AMRAH.

I.	Late I.	Late I. or Early II.		Probably II.	II.	Late II. to IV.	
x 3	b 91	b 33	b 140	b 69	b 137	b 97	b 2
x 8	b 13	b 59	b 146	b 54	b 178	b 4	b 175
x 41	b 180	b 80	b 172	b 57	b 96	b 7	b 98
x 45	b 185	b 81	b 55	b 58	b 12	b 9	b 182
x 57	b 50	b 115	b 142	b 173	x 74	b 10	
x 60	x 50	b 131	b 177	b 70		b 145	
	x 51	b 133	b 99	b 148		b 126	



## NEGADAH &amp; BALLAS.

Late Predyn- astic.	Late Predyn- astic-I.	I.	I-II.	II.	II-III.	Early III.	III.	Late III.	III-IV.	IV.	Late IV.
Q 99	Q 97	Q 93	Q 24		Q 172	179	161	71 <sub>3</sub>	353 <sup>x</sup>	212 <sup>x</sup>	446 <sup>4</sup>
N 39	Q 98	Q 99 <sup>x</sup>	Q 68 <sup>x-a</sup>		? T 15	265	162	107	524 <sup>xx</sup>	265 <sup>xx</sup>	
	Q 874	Q 100	Q 87				201	179 <sup>x</sup>	300	? 358 <sup>x</sup>	
		Q 106	Q 445				? 212	265 <sup>x</sup>	Q 81	686 <sup>xx</sup>	
		Q 190					353	524 <sup>x</sup>	? T 15	103 <sup>x</sup>	
		Q 208					? 358	526		143	
		Q 337					365	586 <sup>x</sup>		180	
		Q 338					522	62		235	
		Q 428					524	? 103		446 <sup>4</sup>	
		N 17					530	178		446 <sup>4</sup>	
		N 1248					586	260		446 <sup>3</sup>	
							764	275		Q 80 <sup>x</sup>	
							836	311			
							850	314			
							865	367			
							Q 63				

x = intrusive. a = shaft.

— = round pot. ~ = square pot box. .... = wood.

EL KAB.<sup>1</sup>

L. P.-I.	I.	I-II.	II.	I-III.	II-III.	III.	III-IV.	IV.	I-V.
L 1	L 2	141	L 11	L 5	13	St. 7	St. 1	e <sup>1</sup> . m. l.	178
L 3	L 4	153	L 12	L 7	14	St. 8	St. 2	318 A. C.	
	L 10		? 94	L 8	83	89	St. 6	B.	
			? 239	L 9	? 96	101	St. 9	D.	
				206	179	110	St. 10	E.	
				241	222	118	St. 12	42	
					237	123	88	101	
					247	133	99	174	
						136	131	? 186	
						170	166	228	
						172	187	231	
						177	192	249	
						185	214	? 280	
						191	288	315	
						? 204	301	316	
							312	319	

<sup>1</sup> Quibell has recognized correctly that the stairway tombs are earlier than the shaft tombs, and that the dates are respectively III and IV Dynasties.<sup>2</sup> The letters e. m. l. mean "early", "middle", "late".

## THIRD EGYPTIAN DYNASTY.

III.	Late III.	Early IV.	IV.	Late IV.	V.	After VI.
R 46	R 19	R 64	R 75	R 70	R 50	R 71 <sup>x</sup>
R 1	70 A	63	R 88 A-C		R 89	
R 2		62	R 92		R 80	
R 14		61	R 94 (?)		56 A-B	
		54	93		68	
		55 A	95		57	
			96		58	
			? 87		67	
			? 250		97	
			? R 72		98	
					99	
					R 66	
					55 B	
					? R 59	
					R 251	

# LIST OF TOMBS IN NUMERICAL ORDER<sup>1</sup>.

Cemetery N. 1500.

Tomb Number N.	De- scriptive Text p.	Figure No.	Photograph of Tomb Pl.	Pottery Photo- graph Pl.	Stone Vessels Pl.	Other Objects Pl.	Place on Map I.	Referred to in Text p.	Tomb Type	Date
1501	22	24, 25	13 <sup>d</sup>	...	...	42 <sup>c</sup> , 43	Z 2	...	Small, wood roof	I.
1506	33	55, 56 II.	11 <sup>a-c</sup>	55	...	...	Y 2	5, 10, 11, 12, 14	Large, wood roof	I.
1508	— 1608	...	...	...	...	...	...	...	...	...
1511	Middle	Kingdom	Burial	...	...	...	...	...	...	XII.
1512	38	68-70	19, 20	52 <sup>b</sup>	45 <sup>a</sup>	41 <sup>a</sup>	W 2	4, 7, 8, 10, 12, 14	Large, wood roof with stairway	I.
1513	48	24-26	83-87	56 <sup>b</sup>	46 <sup>b</sup> , 47	41 <sup>b</sup>	Z 1	9, 10	Large, corbel with stairway	II.
1514	44	II, 77-80	27, 28	56 <sup>a</sup>	48 <sup>b, c</sup>	40 <sup>a</sup> , 41 <sup>c</sup> 43	Y 2	5, 6, 7, 9, 10, 13, 14	"	II.
1515	47	81-82	33 <sup>b</sup> , 35 <sup>c, d</sup>	...	50 <sup>b</sup>	40 <sup>b</sup>	Z 2	7, 10, 13, 14	"	II.
1515 <sup>x</sup>	— 1516	...	...	...	...	...	...	...	...	...
1516	...	...	...	...	...	...	Z 1	10	Small, corbel	II.
1517	...	...	...	...	...	...	Z 1	...	Small, wood roof	II.?
1518	...	...	...	...	...	...	A 1	...	Indeterminable	...
1521	18	...	...	53 <sup>a</sup>	...	...	W 2	...	"	I.?
1522	18	6, 7	...	53 <sup>a</sup>	...	...	W 2	...	Under boulder	I.
1523	62	122-124	39 <sup>c</sup>	...	50 <sup>c</sup>	...	W 2	...	Small, corbel	III.?
1525 <sup>I</sup>	17, 20	18-20	16 <sup>a</sup>	54 <sup>a</sup>	...	...	Y 1	10	Small, wood roof	Late I.
1525 <sup>II</sup>	20	18-20	16 <sup>a-c</sup>	54 <sup>a</sup>	...	...	Y 1	10	"	"
1526	43	76	31 <sup>a-c</sup>	...	49 <sup>a, b</sup>	41 <sup>a-c</sup>	Z 2	— 1571	Large, corbel with stairway	II.
1529	26	47, 48	23 <sup>d</sup>	54 <sup>b</sup>	...	...	W 2	10	Small, wood roof	II.
1531 <sup>a</sup>	16	3	...	...	...	...	X 1	...	"	I.
1531 <sup>B</sup>	21	3	...	...	...	42 <sup>a</sup>	X 1	10	"	I.
1532	29	52-54	4, 5	53 <sup>a-b</sup> , 54 <sup>b</sup>	46 <sup>a</sup>	6-9	X 1	7, 10, 12, 14	Large, wood roof without stairway	I.
1533	28	50-51	10 <sup>a</sup>	54 <sup>b</sup>	...	...	W 1	7, 10, 11, 12, 14	"	I.
1535	17	...	18 <sup>a</sup>	...	50 <sup>c</sup>	...	Z 2	...	Indeterminable	Late I.
1536	17	...	18 <sup>b</sup>	...	...	...	Z 2	...	Mud box	"
1538	15	1	...	...	...	40 <sup>b</sup>	Y 2	6	Wooden box	"
1538 <sup>A</sup>	15	1	14 <sup>d</sup>	...	...	...	Y 2	...	"	"

<sup>1</sup> Numbers not in this list were not used for tombs in these two cemeteries.



Tomb Number N.	Descriptive Text p.	Figure No.	Photograph of Tomb Pl.	Pottery Photograph Pl.	Stone Vessels Pl.	Other Objects Pl.	Place on Map I.	Referred to in Text p.	Tomb Type	Date
1541	25	44	...	...	...	...	V B	3, 10	Small, wood roof	II.
1561	— 1581	...	...	...	...	...	...	...	...	...
1562	59	104-106	39 <sup>d</sup>	51 <sup>b</sup>	51 <sup>b</sup>	42 <sup>1</sup> , 43 <sup>k</sup>	Z 2	7, 9, 11, 14	Small, corbel with entrance	II.
1571	43	76	31 <sup>a-c</sup>	...	49 <sup>a, b</sup>	41 <sup>a-c</sup>	Z 2	7, 9, 10, 13, 14	Large, corbel with stairway	II.
1572	53	Map I.	...	...	51 <sup>a</sup>	...	Z 1	7, 9, 10, 14	"	II.
1581	36	65-67	21, 22	52 <sup>a</sup>	45 <sup>b</sup>	40 <sup>a, b</sup>	X-W 2	3, 4, 5, 6, 7, 10, 12, 14	Large, wood roof with stair	I.
1582	16	2 Map II.	14 <sup>b</sup> , 17 <sup>a</sup>	...	...	...	Y 1	...	Wooden box	I.
1584	52	60-90	29, 30	...	...	41 <sup>a-c</sup>	Y 2	9, 10, 12, 14	Large, corbel with stair	II.
1585	64	Map II.	...	...	...	...	Y 2	...	Pottery box, stone slab roof	III.
1586	41	71-75	32, 33	...	48 <sup>a</sup>	39 <sup>a</sup>	Z 2	14	Large, corbel with stairway	II.
1591	18	...	...	...	...	43	W 1	...	Hole	Late II.?
1592	18	Map II.	23 <sup>c</sup>	...	...	41 <sup>b</sup>	Y 2	...	Indeterminable	II.?
1602	17	5	17 <sup>d</sup>	53 <sup>a</sup>	...	...	V 2	...	Mud box	I.
1603	22	22	...	...	...	42 <sup>4</sup>	X 1	10	Small, wood roof	I.
1604	24	35, 36	14 <sup>a</sup>	...	...	41 <sup>a</sup> , 43	Y 1	10	"	II.
1605	54	91, 92	34, 35 <sup>a, b</sup>	...	50 <sup>a</sup>	43, 44 41 <sup>b, c</sup>	Z 1	...	Large, corbel with stairway	II.
1606	23	32-34.	12 <sup>a, b</sup>	54 <sup>b</sup>	...	...	Y 1	...	Small, wood roof	II.
1607 <sup>a</sup>	24	14, 15	14 <sup>f</sup>	...	...	...	X 1	...	"	II.
1607 <sup>b</sup>	19	14, 15	14 <sup>f</sup>	...	...	...	X 1	10	"	I.
1608	34	57, 58	12 <sup>c, d</sup>	...	...	...	X 1	7, 9, 10, 14	Large, wood roof without stairway	I.
1611	57	95-97	37 <sup>a, b</sup>	...	...	...	A 2	7, 11, 14	Small, corbel with entrance	II.
1612	58	98-99	39 <sup>e</sup>	...	...	...	A 2	7, 11, 14	"	II.
1613	58	100-101	...	...	...	...	A 2	7, 9, 11, 14	"	II.
1614	59	102-103	39 <sup>f</sup>	...	...	...	Z 2	7, 9, 11, 14	"	II.
1615	— 1562	...	...	...	...	...	...	...	...	...
1616	25	38, 39	39 <sup>d</sup>	50 <sup>b</sup>	...	...	Z 2	9, 10	Small, wood roof	II.
1617	23	28, 29	...	...	...	...	Z 2	9, 10	"	II.
1618	22	26, 27	...	...	...	...	Z 2	9, 10	"	II.
1619	59	107-109	37 <sup>c, d</sup>	...	...	...	Z 2	7, 9, 11, 14	Small, corbel with entrance	II.
1620	26	49	...	...	...	...	Y 2	10	Small, wood roof	II.
1621	35	59-62	...	...	...	...	Y 2	7, 10, 11, 14	Large, wood roof without stairway	I.
1622	61	116-118	38 <sup>c</sup>	55 <sup>b</sup>	...	...	Y 2	7, 11, 14	Small, corbel	II.

Tomb Number N.	De- scriptive Text p.	Figure No.	Photograph of Tomb Pl.	Pottery Photo- graph Pl.	Stone Vessels Pl.	Other Objects Pl.	Place on Map I.	Referred to in Text p.	Tomb Type	Date
1623	63	114-116	...	...	...	...	Y 2	7, 11	Closed corbel	III-IV.
1624	35	63, 64	12 <sup>a, b</sup>	...	...	...	X 2	7, 10, 11, 14	Large, wood roof without stairway	I.
1625	22	23	...	...	...	...	X 2	10	Small, wood roof	I.
1626	55	93, 94	36 <sup>a-d</sup>	...	...	...	X 2	7, 9, 10, 14	Large, corbel with stairway	Late II.
1627	22	...	...	...	...	...	X 2	10	Small, wood roof	II?
1628	19	12, 13	...	...	...	...	X 2	10	"	I.
1629	25	41, 42	...	...	...	...	Y 2	10	"	I.
1630	62	120, 121	38 <sup>a, b, d</sup>	...	...	...	Y 1	7, 11, 14	Small, corbel with entrance	II.
1631	25	40	...	...	...	...	Y 1	10	Small, wood roof	II.
1632	24	37	...	...	...	...	Z 1	10	"	II?
1633	60	111-115	39 <sup>b</sup>	...	...	...	Z 1	7, 11, 14	Small, corbel with entrance	II.
1634	20	16, 17	...	...	...	42	X 1	10	Small, wood roof	I.
1635	16	4 <sup>a-d</sup>	17 <sup>c</sup>	...	...	...	X 1	...	Basket burial	II?
1636 <sup>a</sup>	16	...	...	...	...	...	X 1	...	"	...
1636 <sup>b</sup>	17	4 <sup>a-d</sup>	17 <sup>b</sup>	...	...	...	X 1	...	Mud box	...
1637	26	45	...	...	...	...	V 1	3, 10	Small, wood roof	II.
1638	23	30, 31	...	...	...	...	W 2	10	"	I.
1639	64	130	15 <sup>c</sup>	...	...	...	V B	...	Large, wood roof	I?
1640	63	128, 129	...	...	...	...	W 2	7	Small, closed corbel	III-IV.
1641	26	46	...	...	...	...	V 2	3, 10, 11	Small, wood roof	II.
1642	25	43	...	...	...	...	V 2	10	"	II.
1643	21	21	13 <sup>c</sup>	...	...	...	Y 1	10	"	I.
1644	23	...	...	...	...	...	W 2	10	"	I.
1645	18	Map II	18 <sup>d</sup>	...	...	...	Y 2	...	Indeterminable	II?
1646	17	Map II	16 <sup>d</sup>	...	...	...	Y 2	...	Mud box	II?
1647	18	8-11	15 <sup>a, b</sup>	...	...	...	X 2	10	Small, wood roof	I.
1648	60	91, 110	35 <sup>a</sup> , 39 <sup>a</sup>	...	...	...	Z 1	7, 9, 11, 14	Small, corbel with entrance	II.
1649	24	...	...	...	...	...	Y 1	10	Small, wood roof	...
1650	24	...	14 <sup>c</sup>	...	...	...	Y 1	10	"	...
1651	25	Map II	...	...	...	...	Y 2	...	Indeterminable	...
1652	18	...	...	...	...	...	X 2	...	"	I.
1653	18	...	...	...	...	...	X 2	...	Small, wood roof	I.



## Cemetery N. 3000.

Tomb Number N.	Descriptive Text p.	Figure No.	Photograph of Tomb Pl.	Pottery Pl.	Stone Vessels Pl.	Other Objects Pl.	Place on Map III.	References in Text p.	Tomb Type	Date
3001	82	157	57 <sup>b</sup> , 75 <sup>d</sup>	...	72 <sup>a</sup>	...	C-B	65	Corbel vault?	II.
3002	83	157	...	...	72 <sup>f</sup>	...	C-B	65	"	II.
3003	85	133	61 <sup>a</sup>	74 <sup>a</sup>	72 <sup>f</sup>	...	B-D	65	Stone slab roof	II.—III.
3011	68	134	...	...	72 <sup>f</sup>	...	C-B	65	Small, wood roof	II.
3012	77	145-146	60 <sup>c-e</sup> , 61 <sup>b</sup>	...	72 <sup>b</sup>	...	C-B	7, 14, 65	Small, corbel with entrance	II.
3013	74	140	60 <sup>a, b</sup> , 69 <sup>c</sup>	...	41 <sup>c</sup> , 72 <sup>b</sup>	...	D-A	7, 65	Large, corbel with entrance	II.
3014	79	149-151	64, 65	74 <sup>a</sup>	...	...	B-D	7, 12, 14, 65	Small, corbel with entrance	II.
3015	81	155-156	67 <sup>e, f</sup>	...	72 <sup>c</sup>	...	D-A	7, 65	"	II.
3016	69	135	...	73 <sup>b</sup>	70 <sup>a</sup>	...	C-B	7, 65	Large, wood roof without stair	I.?
3017	72	138, 139	58, 59, 69 <sup>a, b</sup>	74 <sup>b</sup>	71 <sup>a, b</sup>	...	B-D	7, 65	Large, corbel with stair	II.
3018	85	138	67 <sup>d</sup> , 68 <sup>a</sup>	...	73 <sup>c</sup>	...	B-D	65	Pottery box	II.
3019	87	138	...	...	...	...	B-D	65	Stone slabs	IV.?
3021	84	...	...	...	...	...	C-B	65, 66	...	...
3022	77	147, 148	57 <sup>a</sup> , 61-63	75 <sup>c</sup>	72 <sup>f</sup>	...	B-D	7, 12, 14, 65	Small, corbel with entrance	II.
3023	84	160-162	69 <sup>f</sup>	75 <sup>b</sup>	...	...	B-D	7, 65	Small, wood roof?	...
3024	83	158	...	...	72 <sup>b</sup>	...	B-D	65	Indeterminable	III.
3025	86	...	75 <sup>d</sup>	...	72 <sup>b</sup>	...	C-B	65	Burial in hole	...
3026	86	...	...	...	...	...	C-D	65	Oval mud box	II.
3031	75	141-144	66, 67 <sup>b, c</sup>	70 <sup>b</sup>	70 <sup>b</sup>	73 <sup>c</sup>	A-C	7, 65	Large corbel with stairway	II.
3051	83	159	69 <sup>e</sup>	75 <sup>c</sup>	72 <sup>d</sup>	...	C-B	65	Small, corbel?	II.?
3052	67	131	...	75 <sup>b</sup>	72 <sup>d</sup>	...	C-B	65	Small, wood roof	II.
3053	80	152-154	67 <sup>a, b</sup>	75 <sup>c</sup>	72 <sup>e</sup>	...	D-A	7, 65	Small, corbel with entrance	II.
3054	68	132	...	...	72 <sup>b</sup>	...	C-B	65	Small, wood roof	II.
3055	83	...	...	...	...	...	C-B	65	Small, corbel?	...
3061	85	163	68 <sup>b</sup>	...	72 <sup>b</sup>	73 <sup>c</sup>	B-D	65	Pottery box	...
3062	71	141, 135, 136	66	...	...	...	A-C	7, 65	Large, wood roof with stairway	I.?
3063	82	...	...	...	...	...	A-C	65	...	...
3071	71	141, 137	67 <sup>d</sup>	...	72 <sup>b</sup>	...	A-C	7, 65	Small, corbel with stairway	II.
3072	84	...	...	...	...	...	C-B	65	...	...
3091	86	164	68 <sup>c, f</sup>	74 <sup>a</sup>	73 <sup>a</sup>	43 <sup>c</sup>	C-B	65	Mud box	II.
3092	87	...	68 <sup>c, d, f</sup>	...	...	...	C-B	65	Burial in hole	IV.?
3093	85	...	68 <sup>c, d</sup>	...	...	...	C-B	65	...	...
3094	85	...	...	...	...	...	C-B	65	...	...
3150	87	...	75 <sup>d</sup>	...	73 <sup>a</sup>	...	C-B	65	Accidental deposit	II.

## LIST OF PLATES.

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Frontispiece. General view from the cliff above the camp looking south. Girga in the distance.

1. Cemetery 3000. 2. Cemetery 2000. 3. Cemetery 1000. 4. Cemetery 1500.

Plate 1. General view from the hill above Cemetery 3500 looking southeast. Mesaîd and Meshaikh are in the distance. 1. Cemetery 3000. 2. Cemetery 2000. 3. Cemetery 1000. 4. Cemetery 1500.

Plate 2. General views:—

a. Looking north from the river bank. S. marks Sheikh Farag. 1. The first ravine.

b. Looking northeast from the same spot as a. 2. The second ravine. 3. The third ravine, and Naga-ed-Dêr.

c. A nearer view of the desert between the second and the third ravines.

Plate 3. Views of Cemetery 1500:—

a. From the limestone hill, from the point marked \* on (b), looking west over Cemetery 1500.

b. From the cultivation looking east over Cemetery 1500. The view of the cemetery itself is obscured by the dump-heaps. The \* marks the limestone hill.

Plate 4. N. 1532, tomb of the wood-roofed type without stairway, after the removal of the gold ornaments. Looking down from the edge of the west side. Meter staff on top of south cross wall.

Plate 5. N. 1532, views of the gold ornaments in position.

a. Head with the circlet and the necklace.

b. More distant view showing the remains of the skeleton.

c. View of chambers A, B and C.

Plate 6. N. 1532, the main pieces of the gold find. 1. The capsule with the inlaid Neit-sign (reverse on Pl. 9). 2. The bull with the Hathor-head girdle about the neck (reverse on Pl. 9). 3. The male gazelle with the s3 girdle about the neck (reverse on Pl. 9). 4. The univalve shells of beaten gold. The underside is shown in the right hand shell in the top row. 5. The beads of a compressed barrel shape with indented pattern. 6. The golden tips of the copper girdle (?).

Plate 7. N. 1532, strings of beads.

1. Carnelian and hard speckled stone beads, arranged according to order found in fragments except there may have been more than three carnelian beads between two speckled beads. 2, 3. Carnelian. 4, 5, 6. Thin gold filled with cement. 7. Solid gold beads. 8. Tentative stringing of gold and carnelian beads, certainly *not correct*. 9, 10. Broken gold beads.



## Plate 8. N. 1532, beads.

1. Carnelian tubular and barrel-shaped beads. 2. Middle bead is of haematite; and the others are of carnelian. 3. Middle bead is a short barrel-shaped bead of haematite; and the other three beads are of carnelian. 4. From left to right, beryl (?), amethyst and carnelian. 5. Faded blue glazed paste beads (fayence). 6, 7. Soft grey stone and white shell (or limestone) beads. 8. Light green stone, tubular beads, very short. 9. Dark green stone, tubular beads, short. 10, 11. Garnet beads. 12. Faded blue glazed beads (fayence). 13—16. Carnelian beads.

## Plate 9. N. 1532, flint, slate, gold and copper bracelets, seal cylinder &amp;c.

- a. Reverse of Pl. 6, nos. 1, 2 and 3.
- b. Gold rings, shown also in d.
- c. Gold seal cylinder and case shown also in d. (see p. 31).
- d. Gold wire, seal cylinder and case. Gold circlet or head band. From the left, a flint bracelet, a slate bracelet, a gold bracelet and a broad copper bracelet in which are wedged two more gold bracelets, Beneath are two finger rings (see b.).

## Plate 10. Large tombs of the wood-roofed type without stairway.

- a. N. 1533. View of substructure, looking down from the north end.
- b. N. 1506. Logs of second, or upper, roof seen from above (see Pl. 11<sup>c</sup>). Meter staff.
- c. N. 1506. Substructure, seen from the northern end looking down. Symbolic doorway marked by incised line in mud plaster, visible on northern face of southern cross wall. Meter staff.

## Plate 11. Large tombs of the wood-roofed type without stairway.

- a. N. 1506. Traces of superstructure from the southwest, see map pl. 77. The meter staff lies east and west in the doorway.
- b. N. 1506, superstructure. Nearer view. Meter staff lies east and west in the doorway.
- c. N. 1506. The second, or upper, roof lies just above the white †, see Pl. 10<sup>b</sup>. Meter staff.
- d. N. 1621. Natural strata and filling debris at the south end. Meter staff.

## Plate 12. Large tombs of the wood-roofed type, without stairway.

- a. N. 1624, substructure from the north, looking down.
- b. N. 1624, substructure from the south. Additional chambers in the north end with symbolic door marked in the plaster.
- c. N. 1608, substructure from the north looking down. Broken by plunderers.
- d. N. 1608, substructure. Wooden roofing beam at the north end marked with a †, seen from the south.

## Plate 13. Small wood-roofed tombs with a single chamber, without stairway.

- a. N. 1606 from the east, showing the wooden roofing logs on top the walls. Traces of mud-brick cover are visible just above meter. On the left is a Coptic burial extended on the back, head west.
- b. N. 1606. Brickwork on west side, stripped of its plaster.

- Plate 13. c. N. 1643. Looking down from the west. Shows traces of wooden roof. On the left a Coptic burial extended on back, head west.  
d. N. 1501. Looking down from the west. Mud-brick of roof and ends of logs just under meter staff.
- Plate 14. Various small tombs.  
a. N. 1604. Looking down from the north, showing fragments of burial.  
b. N. 1582. From the north, showing floor of coffin and fragments of alabaster between coffin and wall. Taken after Pl. 17<sup>a</sup>.  
c. N. 1649. From the west.  
d. N. 1538<sup>a</sup>. From the south, showing wall of N. 1506 superstructure built over pot.  
e. View looking east between N. 1513 and N. 1584. In the foreground are N. 1631 and 1643. In the centre is 1525.  
f. N. 1607<sup>a</sup> and  $\beta$ . From the south. Note wooden logs on right, and Coptic burials in the background.
- Plate 15. Various wood-roofed tombs.  
a. N. 1647. From the south.  
b. N. 1647. Near view of roof of logs and mud-brick as found on west side. From the east.  
c. N. 1639. From the northeast. Note remains of Coptic burial.
- Plate 16. Burials in boxes.  
a. N. 1525. Boxes I and II, looking down from the west side, but reversed in the reproduction.  
b. N. 1525. Box II, looking down from the west side, showing pots which were underneath Box I.  
c. N. 1525. Box II burial, looking down from the west side. The bottom of the picture is at the bottom of the plate, like a.  
d. N. 1646. Mud box looking down from the west end.
- Plate 17. Burials in boxes.  
a. N. 1582. Wooden box, from the north. Taken before Pl. 14<sup>b</sup>.  
b. N. 1636. Burial in a mud box, from the east.  
c. N. 1602. Mud box, from the east.  
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- Plate 18. Various burials.  
a. N. 1535. Contracted burial with the lower part cut away by a Coptic burial extended on the back, head west. Seen from the east: the bottom of the picture is towards the bottom of the book.  
b. N. 1536. Contracted burial (fragmentary) in a mud box, from the east. Remains of Coptic burial wrapped in cloth to the left of the box.  
c. N. 1635. Remains of contracted burial in a mud-plastered basked. The mud-brick wall is cut up by Coptic burials of which we found remains in place.  
d. N. 1645. Contracted burial, from the east.



Plate 19. N. 1512, large wood-roofed tomb with stairway. Substructure seen from the east side, looking down.

Plate 20. N. 1512, large wood-roofed tomb with stairway.

a. Mud-brick block in door at foot of stair, seen from the inside. All courses consist of headers, bricks on the edge and bricks on the side alternating. Plaster of doorway on right side, bulged under pressure.

b. Chamber D. Pile of stone vessels and pottery *in situ* seen from above, from the east side.

c. N. 1512, substructure, with stone vessels and pottery in position. Looking down from the north end. Staff is two meters long.

Plate 21. N. 1581, large wood-roofed tomb with stairway. Substructure seen from the east side.

Plate 22. N. 1581, large wood-roofed tomb with stairway.

a. North end of substructure. The position of the roofing logs of the two roofs is shown by white crosses.

b. Superstructure from the south, marked by white crosses. Note Coptic burials, extended on back, head west.

c. Superstructure. Near view of niches in the southern face, cut by Coptic burials.

Plate 23. N. 1581 and two small graves.

a. N. 1581, flint knife on floor in Chamber A, marked by white cross.

b. N. 1581, the only stone vessels and pots found in position, seen from the north.

c. N. 1592. Remains of contracted burial beside fragment of decayed brick wall. The bracelets were in the debris less than 10 cm above the spot where they are lying.

d. N. 1529. From above, from the east side.

Plate 24. N. 1513, large corbel-roofed tomb with stairway. Substructure from the east side. The stone vessels and the pottery in the background on the right have been removed from the northeastern chamber. The fragments in the background on the left were found in the debris, mostly in the central chamber.

Plate 25. N. 1513, large corbel-roofed tomb with stairway. Substructure with contents from the west side south of the stairway, taken at the same stage as Pl. 24. Note the remains of the burial in the central chamber. The stone near it lies on the floor about 10 cm below the point where the copper blade No. 1 was found in the debris. The skeleton in Room B is seen under the stone vessels.

Plate 26. N. 1513, large corbel-roofed tomb with stairway.

a. The northeastern corner in process of excavation showing complete decay of mud-brick walls. Looking northeast.

b. North end with remains of second skeleton. Looking down from the east side.

c. South end of central chamber (c), showing brickwork. Looking south.

Plate 27. N. 1514, large corbel-roofed tomb with stairway.

a. Substructure and stairway from the east.

b. Substructure from the north.

- Plate 27. c. Substructure from the south. The bottom of the picture is towards the bottom of the book.  
d. Substructure, south end, from above. Showing men hunting for cross walls of end chambers.
- Plate 28. N. 1514, large corbel-roofed tomb with stairway.  
a. South side of doorway, showing hole containing decayed remains of the first wooden log of the roof over the doorway.  
b. Stairway with mud-brick block seen from the west over the south end of the vault of 1584. The vault is cut by a Coptic burial, extended on back, head west.  
c. N. 1514, superstructure. Offering niches in the west face, seen from the west.  
d. N. 1514, superstructure, from the south. The meter staff lies at right angles to the wall between superstructure proper and enclosing wall.
- Plate 29. N. 1584, large corbel-roofed tomb with stairway.  
Seen from the east side. The top of the stairway showed on the surface when we began excavations. The line of the present surface is seen under the dump-heaps in the background.
- Plate 30. N. 1584, large corbel-roofed tomb with stairway. Structural details.  
a. South end of vault with cross wall and south side of doorway seen from the north. See b.  
b. Larger view of south side of doorway. Wooden roofing logs marked with white crosses, see fig. 80—90. The upper cross marks the level of the roof of the western section of the doorway. The lower crosses mark the level of the roof of the eastern section of the doorway; and the right hand lower cross marks the separation between the two. The brickwork on the right of the middle cross and below the top cross is part of the door block. Above, remains of Coptic burial are seen on a level with upper cross.  
c. Stairway and blocked entrance seen from the west. Roofing logs over doorway cross on a level with top of meter staff. A band of salty gravel clings to walls and door block just under roof level.  
d. Joint between corbel vault and cross wall in south end of vault. From the north.
- Plate 31. N. 1571, N. 1526 and 1572, large corbel-roofed tombs with stairway.  
a. N. 1571, N. 1526. Objects *in situ* on floor. Cross walls could not be traced. Looking down from the north end.  
b. N. 1571, N. 1526, Small objects (Nos. 23—28) seen from above. The meter is 50 cm long.  
c. N. 1571, N. 1526. Stone vessels, bracelet and pots (Nos. 10—17, 22), seen from the east.  
d. N. 1572. Looking down on traces of contracted burial on the left side, head east, on the floor on south side of main vault.
- Plate 32. N. 1586, large corbel-roofed tomb with stairway. Substructure from the east.



Plate 33. N. 1586 and 1515, large corbel-roofed tombs with stairway. Details.

- a. N. 1586; inside of south end of central chamber.
- b. N. 1515, entrance at foot of stair, blocked with mud brick. Plaster partly removed showing roofing log over doorway. From the west. Taken after Pl. 35<sup>c</sup>.
- c. N. 1586, wasp-nests on plaster on west face of central chamber, south of doorway.
- d. N. 1586, groin in southeastern corner of central chamber.

Plate 34. N. 1605, large corbel-roofed tomb with stairway.

- a. Stone vessels on floor, looking down from the east side.
- b. Pottery in the northeastern corner. Shows cutting made by me in effort to find corbel.
- c. Stairway as found, filled with stones, from the east.
- d. Stairway cleared from the west. The log roof of the doorway crosses at the upper end of meter staff. The hole through the door-block was found filled with gravel, and was probably a hole made by plunderers.

Plate 35. N. 1605 and 1515, large corbel-roofed tombs with stairway.

- a. N. 1648, a small imitative corbel just north of stairway of 1605, and earlier than that stairway. From the south. See Pl. 39<sup>a</sup>.
- b. N. 1605, skeleton of calf (?) in the southwestern chamber, seen from above.
- c. N. 1515, stairway with blocked entrance seen from the west. The plaster of the door-block was laid over the first log of the roof of the doorway, marked by a ridge visible at cm 80—90 on the staff. Pl. 33<sup>b</sup> shows this log after stripping off the greater part of the plaster.
- d. N. 1515, southeastern corner. The gravel filling between the corbel and the upper brick cover is marked with a white cross.

Plate 36. N. 1526, large corbel-roofed tomb with stairway, perhaps the latest large corbel in the cemetery.

- a. Looking down on roof from the south. The plaster has been stripped off the roof, except at the southern end. This picture has been reversed in the reproduction.
- b. Pots in the northeastern corner of main chamber, hole in door-block and at the top of the picture the small holes containing decayed remains of roofing logs of the doorway.
- c. The doorway, showing curve of truncated vault which comprises the doorway, the hole through the door-block and the remains of the roofing logs across the top of the doorway. From the inside.
- d. The same, from the outside. The roofing log, marked with white crosses, is, as usual, plastered over.

Plate 37. Imitative corbel-roofed tombs with entrance.

- a. N. 1611, substructure, seen from the west. Shows curvature of the inside of the corbel and of the doorways into the small chambers.
- b. N. 1611, entrance of substructure seen from the south. The mud bricks in the lower part of the stairway belong to the door-block.

- Plate 37. c. N. 1619, entrance and substructure from the northeast. Door-block across entrance.  
d. N. 1619, remains of roofing logs of doorway visible on east side of doorway.

Plate 38. Imitative corbel-roofed tombs with entrance.

- a. N. 1630, pottery in the northeastern corner.  
b. N. 1630, eastern end, showing curvature of the inside of the vault. The sticks protruding from the walls are the roots of a plant which have penetrated the walls from above.  
c. N. 1622, substructure seen from the west.  
d. N. 1630, substructure from the southwest.

Note the doorway, consisting of a truncated (?) corbel, blocked with mud brick, and the make-weight of the corbel on the outside. The hole in the upper right corner is a Coptic grave.

Plate 39. Imitative corbel-roofed tombs with entrance.

- a. N. 1648, section of western wall. The bricks have decayed except in the upper courses; but the make-weight is clear. See Pl. 35<sup>a</sup>.  
b. N. 1633, doorway with door-block, from the north. The meter staff is on a level with the roofing logs.  
c. N. 1523, from the west.  
d. N. 1562, door-block cut by N. 1616. From the south.  
e. N. 1612, from the north.  
f. N. 1614, from the southwest.

Plate 40. Flint and copper implements and weapons.

- a. On the right, a flint knife from N. 1581, (No. 1, — See Pl. 23<sup>a</sup> and fig. 65). On the left, a flint knife from N. 1514, (No. 48, — See Pl. 27<sup>c</sup> and fig. 77, marked with white cross and also a, b). Both sides are roughly worked. Scale 1:2.  
b. Flint knife from 1586, nodules (marbles?) from 1538, and worked chips from 1515, 1538, 3551, 1529, 571 (sic!) and 1581. The underside is slightly concave, as seen in the second, the fourth, the ninth and the tenth chips in the lowest row. Scale, about 1:4.  
c. Copper implements from N. 1513 (Nos. 1—3, see Pl. 25 and fig. 86). No. 1 is below; No. 2<sup>a</sup> is above on the left; No. 2<sup>b</sup> is above on the right; No. 3 is on the middle right. Scale, about 1:4.

Plate 41. Beads, ornaments and toilet pots.

- a. Above, beads from N. 1604. On the left, tubular beads of light green stone; in the middle three barrel-shaped carnelian beads; on the right, faded blue glazed paste beads (fayence). Scale 1:1.

In the middle, two strings of beads from N. 1584. No. 5<sup>a</sup> are of garnet; No. 5<sup>b</sup> are of carnelian and glazed steatite (?) alternating. Scale 1:1.

Below on the left is a fragment of a crystal cup the outside of which is carved in relief (by rubbing) to imitate a lotus flower. From N. 1512 (No. 67, see fig. 68, found in room E about 10 cm above floor with a lot of slate splinters belonging to No. 64). Scale 1:1.



Below on the right is the half of a bivalve shell for holding a cosmetic, from N. 1571 (No. 28, see 31<sup>b</sup> and fig. 76). Scale 1:1.

Plate 41.

- b. Above on the left a slate bracelet from N. 1513 (found about 20 cm above the first skeleton, see p. 52). Above in the middle two slate bracelets, and one flint bracelet from N. 1592 (see Pl. 23<sup>c</sup>). Above on the right, one bone bracelet from N. 1541.

In the second are bracelets from N. 1584 (No. 4) from the left, a flint bracelet, a slate bracelet, two fragments of a flint bracelet and three fragments of at least three ivory bracelets.

Below on the left, an ivory ladle with the tip of the handle missing, from N. 1574 (No. 1). Below in the middle, fragments of an ivory cup or ladle, with a handle (on the right) and ornamented with a rope pattern in relief from N. 1571 (No. 27, see Pl. 31<sup>b</sup> and fig. 76). Below on the right fragments of flint bracelet and fragments of copper needles from N. 1605 (No. 27—28). Scale 1:4.

- c. Above on the left, a cosmetic dish consisting of two hollow pieces which, when fitted together, have the form of an animal's head (bull?). The dish opens by revolving one of the pieces about a string hinge at the neck. The eyes were inlaid with shell discs. From N. 1605 (No. 12—13, see Pl. 34<sup>a</sup> and fig. 91).

On the right is the half of a similar dish in the form of a fish from N. 1571 (No. 29, see Pl. 31<sup>b</sup> and fig. 76). Eye inlaid with shell disc.

In the second row on the left, two small cylindrical jars and a large pendant from N. 1584. The first jar (1584, 7) is of volcanic ash; the second (1584, 6) is of alabaster; and the pendant (1584, 8) is of slate. On the right is a small ivory knob (?) from N. 1514 (No. 50).

Below on the left are two small vessels of slate from 1571 (Nos. 23 and 24, see Pl. 31<sup>b</sup> and fig. 76).

On the right with the number 559 is a small jar of basalt with two handles from the third dynasty tomb N. 559. On the extreme right with the number 30, is a small two-handled jar of black stone with a cord pattern from N. 3013 (No. 15, see p. 75). Scale 1:4.

Plate 42. Beads.

Above are two beads and a pendant of shell (or limestone) and a necklace of tubular beads of soft dark grey stone and of shell or limestone, from N. 1562 (No. 9). The second and third necklaces from above are of similar tubular beads from N. 1531<sup>β</sup> and N. 1501. The lowest necklace is composed of disc beads of similar material and one univalve shell. From N. 1603. Scale 1:1.

Plate 43. Cylinder seals and mud seal impressions.

- a. Two views of a mud ball. On one side two holes (string holes): on the other one, impression of hatched lines.
- b. Cylinder seal of black stone, N. 1591, 1, much worn.
- c. Cylinder seal of wood, N. 3091, 4, half decayed.

- Plate 43. d. Mud impression of a cylinder seal, N. 1514.  
 e. Cylinder seal of dark grey stone, N. 1605, 8, nearly new.  
 f. " " " " " " " 1604, 2, worn.  
 g. " " " " " " " 1605, 9, much worn.  
 h. " " " " " " " 1605, 7, worn.  
 i. " " " " " " " 1501, 1, worn.  
 j. " " " " " " " 1605, 6, nearly new.  
 k. " " " " " " " 1562, 3, nearly new.<sup>1</sup>  
 l. " " " " " " " 1605, 5, much worn.  
 m. " " " " " " " 1605, 3, much worn.  
 n. " " " " " " " 1605, 4, much worn.  
 o. " " " " " " " 1605, 1, slightly worn.  
 p. " " " " " " " 1605, 2, slightly worn.

Scale 1:1.

- Plate 44. Inscriptions on cylinder seals, staniol impressions and photographs of ends of seals.  
 b—q. Inscriptions on seals represented in Pl. 43. Seal q is the gold seal N. 1532, Pl. 9.  
 v—z. Above on the right are copies of five seals, very kindly given me by Mr. P. E. NEWBERRY with permission to publish them for comparison. These are all in private possession except y, which is in the Strassburg Museum and is published with the kind permission of Prof. SPIEGELBERG.

h, g, k, m, o. Below are photographs of staniol impressions of five of these seals.<sup>2</sup>

k, m, h, r, o, g, f, b. Below on the left are the photographs of eight seals showing the ends and the holes through the seals. Seal r is a fourth dynasty seal with a characteristic large hole, and is shown for comparison.

Scale 1:1.

- Plate 45. Stone vessels from first dynasty tombs.

- a. Stone vessels from N. 1512. The numbers of the objects in the tomb are given in white. Nos. 41, 26, are of limestone. Nos. 20, 40, 30 (misprint for 20), 48, 15, are of alabaster. Nos. 20 and 30 are parts of the same bowl. Nos. 35, 1, 56, 12, 63, 64, 13, 5), 14 and 34, are of slate. Nos. 42, 24, 39 and the unnumbered bowl (from the debris) are of volcanic ash. Scale 1:6.  
 b. Stone vessels from N. 1581. Above from the left, the cylindrical jars (1 = 1581, 2; 2 = 1581, 3) are of alabaster. The next bowl is of volcanic ash. The rest of the vessels are of alabaster. All these, except 1 (2) and 2 (3) were found in the debris in the tomb chamber. Scale 1:6.

- Plate 46. Stone vessels.

- a. Stone vessels from a first dynasty tomb, N. 1532. The unnumbered fragments above were all found in the debris in the tomb. Those in the top row are slate; those in the second row are of volcanic ash, except the dark piece on

<sup>1</sup> On p. 118, by a misprint, o and k are interchanged; but o = N. 1605, 1, and k = N. 1562, as above.

<sup>2</sup> In this group, p is a misprint for k.



the right, which is of dark opaque diorite (?). Below, 2 is of dark-veined porous stone; 3 is of alabaster; 1 is of light blue volcanic ash; 4 is of green volcanic ash. Scale 1:6.

Plate 46. b. Stone vessels from a second dynasty tomb, N. 1513.

Above, calcareous alabaster, 28, 58, 35, 19, 53, 23, 36, 4.

Belows the unnumbered piece, no. 5, and two unnumbered pieces are of hard blue volcanic ash. Nos. 46 and 47 are of dark-veined volcanic ash; 44 and 38 are of hard volcanic ash; and 54 is of light blue volcanic ash.

The vessels in the bottom row are of slate; 18, 26, 20, 22. Scale 1:6.

Plate 47. Limestone and alabaster vessels from a second dynasty tomb, N. 1513.

a. Top row, No. 30 is alabaster. The rest of the row are of limestone; 49, unnumbered, and 9 are of a fine pink red-veined limestone; 41, 33 and 29 are of fine hard white limestone.

The rest of the vessels in 47<sup>a</sup> are all of alabaster. Scale 1:6.

b. Alabaster cylindrical jars. Type I<sup>a</sup>: 39, 15, 52, 17, 48, 40, 16 (all in top row); 62 and 66 (in second row). Type I<sup>b</sup>: 55 and 23 (in second row). Type I<sup>c</sup>: 57 (numbered 37 in top row); 56, 64, and 60 (in second row); 37, 63, 27, 61 and 43 (in bottom row). Scale 1:6.

Plate 48. Stone vessels from second dynasty tombs N. 1586 and N. 1514.

a. N. 1586, all found in debris. Counting from the left above: 1 is slate; 2—4 are of volcanic ash; 5 is of alabaster. In the second row: 1—3 are of volcanic ash; 4—5 are of red and white brecchia; and 6—7 are of alabaster. Scale 1:6.

b. Volcanic ash and slate vessels from N. 1514. In the top row, Nos. 5, 8, 2, 11, 21 are of volcanic ash. In the second row, 3 and 20 are of brecchia-like volcanic ash; 23 and 18 are of volcanic ash.

The vessels in the third and the bottom rows are all of slate. Scale 1:6.

c. N. 1514. All the vessels are of alabaster, except 22 in the middle of the top line. No. 22 is of fine hard white limestone (marble?) with black veins. Scale 1:6.

Plate 49. Stone vessels from a second dynasty tomb, N. 1571—N. 1526.

a. Volcanic ash, slate and other stone vessels.

DIAGRAM OF THE PIECES IN PL. 49<sup>a</sup>.

2		8		x 31	x 32
slate		slate		slate	slate
x 37	x 36	x 35	x 34	x 33	x 30
fine volc.	black 1st.	black basalt	grey volc.	fine volc.	brecchia-like volc.
4		x 38		1	11
impure slate		volc. ash		fine volc.	volc.
7		x 40		x 39	5
slate		slate		slate	slate

Scale 1:6.

<sup>1</sup> The unnumbered pieces were found in the debris in the tomb and are referred to in Chapt. XI under the numbers given in this list.

## Plate 49. b. Alabaster vessels.

DIAGRAM OF VESSELS IN PL. 49<sup>b</sup>.

	15		X 44	X 45		3	
					X 46		
X 41	X 42		X 43	25	26	X 47	X 48
X 49		X 50		6			X 51
13			12			X 52	

Scale 1:6.

## Plate 50. Groups of vessels from different second dynasty tombs.

a. N. 1605. No. 25 is of white limestone; 14, slate; 26, volcanic ash; 24, black basalt; 11, black basalt; 22, volcanic ash; 10, alabaster. Scale 1:6.

b. N. 1515. No. 5—10 are plates of pebble polished, red-painted, brown pottery; 13, 11, 1 and 4 are of alabaster; 2 is of volcanic ash. Scale 1:6.

c. N. 1523 and 1535.

N. 1523, No. 5, is of red and white breccia; the rest, Nos. 2, 1, 3, 4, are of alabaster.

N. 1535, No. 2, on the left, is of alabaster; No. 1, on the right, is of slate. Scale 1:6.

d. N. 1882. This tomb is a small corbel with entrance lying between Cem. 1500 and Cem. 500, and is probably of the late second dynasty. The vessels, all of alabaster except 2 (limestone), are given here for comparison. There were also 3 jars of pottery, type V. N. 1881, adjoining this tomb, contained in the debris an intrusive Coptic burial, and was empty except for part of a bowl like 1882, 3 (stone vessel, type XXIV).

## Plate 51. Stone vessels and pottery from second dynasty tombs.

a. N. 1572, stone vessels.

DIAGRAM OF STONE VESSELS IN PL. 51<sup>a</sup>.

23	24		2	X 25	3	X 26
alab.	alab.		alab.	alab.	alab.	alab.
	X 18 <sup>1</sup>	1	X 19	X 20	X 21	X 22
	volc.	alab.	volc.	volc.	alab.	alab.
X 14		X 15 <sup>2</sup>		X 16		X 17
volc.		volc.		volc.		volc.
X 11 <sup>3</sup>			X 12			X 13
slate			slate			slate

Scale 1:6.

<sup>1</sup> Referred to on p. 108 under XVII<sup>b</sup>. 23 as 1572, 8.

<sup>2</sup> Referred to on p. 109 under XVIII, 12, as 1572, x.

<sup>3</sup> Referred to on p. 109 under XVIII, 5, as 1572, x.



- Plate 51. b. N. 1562 (or 1615), stone vessels and pottery. See p. 59. Nos. 2 and 3 are of alabaster; 5, of limestone; the rest are of pottery.  
c. Pottery from 1614 and 1616. Nos. 2, 3, 6 are from 1614. Nos. 1, 4, 5 are from 1616.
- Plate 52. Pottery from first dynasty tombs.  
a. N. 1581, pottery from the floor stratum of debris. Types VI, VII, IX and V.  
b. N. 1512, pottery.
- Plate 53. Pottery from the first dynasty tomb N. 1532.  
a. Pebble-polished, red painted bowls and plates of brown ware. These are numbered in order on the plate 1—23. Nos. 1, 2 are bowls 1532, 5, 8, 9. No. 3, is bowl 1532, 20. No. 4, is bowl 1532, 56. Nos. 5—15 are bowls 1532, 17—19, 21—24, 26—30, 35—38, 68. Nos. 16—23 are plates 1532, 10, 39—49, 52, 55, 66.  
b. Pottery of types I, II, V, XXI, XXII.
- Plate 54. Pottery from first dynasty tombs.  
a. N. 1525. The unnumbered pieces are in the top row; No. 33 beside 27; No. 2 above 29; No. 1, above 30; No. 3 between 24 and 28; No. 4 between 23 and 32, and No. 6 beside 22. Scale 1:6.  
b. Pottery from various tombs. On the left, a piece of type I, N. 1532, 33. Above, two pieces from N. 1529, being No. 4 (type IX) and 3 (type XIV<sup>c</sup>). Above, on the right, two pieces from N. 1606 (type X). Below are pieces 1533, 2, 4, 5, 6, 7. Scale 1:6.
- Plate 55. Pottery from various tombs.  
a. On the left, above, is N. 1521<sup>1</sup>, type XXIV and XIX<sup>a</sup>. Below is 1522, 1, type XIV<sup>b</sup><sup>2</sup>. In the middle, N. 1602, 1—6, type XXIV<sup>b</sup> 1, XVIII, and V. On the right, N. 1522, 2 (type XXIV<sup>b</sup>), and 3 (type XIII<sup>b</sup>) and two unnumbered pieces (type XXIV and type VI). Scale 1:6.  
b. Pottery from second dynasty tombs.  
On the left, N. 1622, 1—10. On the right, N. 1605. Above are three pots of type IX, found in debris above and therefore not certainly from this tomb. Below, three pots selected from Nos. 15—21 (type V). Scale 1:6.
- Plate 56. Pottery in tomb groups.  
a. On the left, first dynasty pottery from N. 1501. On the right second dynasty pottery from N. 1514.  
b. Second dynasty pottery from N. 1513.

<sup>1</sup> N. 1527 by mistake.

<sup>2</sup> Mentioned on p. 95 under XIV<sup>b</sup> as 1522, 3 by misprint.

## CEMETERY N. 3000.

## Plate 57. General views of Cemetery 3000.

- a. Cem. 3000 from above the camp looking west. In the foreground is Cem. 3100 (mainly sixth dynasty).
- b. Debris from the limekilns in Cem. 3000. In the foreground N. 3001. Looking northwest.
- c. Surface of Cem. 3000 after removing limekiln debris. Looking more west than b. N. 3001 is in right middle foreground. The surface in the foreground is not the old cemetery surface, but the first surface of the hard alluvial strata found intact under the limekiln debris. The surface seen in the background is the old cemetery surface (see Map III, Pl. 78).
- d. The eastern half of Cem. 3000 after removing debris. Looking north. The surface seen above N. 3014 is the old second dynasty surface, see explanatory note under c.

Plate 58. N. 3017, view of stone vessels and pottery in position in the interior. Seen looking down from the east side. Note the line marking division between door-block and door just above pot on left of background; and to the left the stone threshold is visible under the doorblock. See Pl. 59, a—e, and 69, a—b. For superstructure, see Pl. 57<sup>d</sup> on the left.

## Plate 59. Details of corbel vaults, N. 3017 and N. 3013.

- a. N. 3013, looking east down entrance slope at doorway with door-block in position. See c.
- b. N. 3017, looking east down entrance slope from a point nearer than a. Shows circular limekiln in place in entrance slope.
- c. N. 3017, view of doorway, looking east, with hole cut through door-block by us. The dark line above the door-block marks the wooden roof of doorway.
- d. N. 3017, view of vessels in place, looking down from north end. Note the limestone slab supporting corbel across the southeastern corner.
- e. N. 3017, limestone chips used as filling between the vault and the sides of the pit. Seen in the northwestern corner, looking northwest.
- f. N. 3013, corbel vault, looking down from the north. Note fusing of bricks in vault.

## Plate 60. Corbel vaults.

- a. South end of N. 3013 showing stone vessels, from the north. See Pl. 69<sup>c</sup>.
- b. North end of N. 3013, showing skeleton and pottery, looking down from the south. See Pl. 69<sup>c</sup>.
- c. N. 3012, looking north. N. 3014 in the background. The ancient surface is seen under the black stratum above the vault. The black stratum is undoubtedly composed of the decayed brick of the superstructure of N. 3012. See Pl. 61<sup>b</sup>.



- d. N. 3012, nearer view, looking north.
- e. N. 3012, interior, as found on opening the vault.

Plate 61. Corbel vault N. 3022.

- a. Looking north over 3003 and 3022.
- b. Looking west over 3022 and 3012. The debris has been cleared away around 3022 down to the first hard alluvial deposit. The ancient surface was about 50 cm above the roof of 3022. Note the limestone chips in north part of corbel of 3012.

Plate 62. Series showing stages in opening corbel vault, N. 3022.

- a. Doorway from the south after removing limestone chips piled about doorway. Shows bricks piled against door-block and plaster covering door-block and loose bricks.
- b. Same, after removing loose bricks. Shows door-block plastered in upper part above line of loose bricks.
- c. Same, after removing plaster from door-block.
- d. Same, after removing door-block.
- e. Same, after cutting away outer section of corbel. Shows that doorway is only open end of corbel vault.
- f. End of vault after cutting away front part and top, from the east, looking *down*. Shows interlacing of bricks of the end and the side of the corbel.

Plate 63. Continuation of series N. 3022.

- a. Section of back end of vault, looking north. Shows condition of interior buried in fallen plaster and broken mud-bricks as it was when vault was opened.
- b. Same as a, after removing rest of vault and the debris from the interior.
- c. Interior of N. 3022 looking down from the north end. Note outline of wooden coffin.
- d. Same as c, after removing pottery. Shows bones of offerings in pans.

Plate 64. Series showing opening of N. 3014.

- a. Vault from south.
- b. Same, after southeastern corner fell off.
- c. Same, after removing plaster from door-block.
- d. Vault from southwest, after removing front of vault.
- e. Section of corbel and interior, as found when opened.

Plate 65. Continuation of series relating to opening of B. 3014.

- a. Section of vault and interior after clearing out debris. From the south.
- b. Interior of vaults after removing debris. Looking down from the south. Note that walls of end chamber do not support roof, and that end chamber contains one pot.

Plate 66. General view of 3062, 3031 and 3071, looking down from the southeast.

Plate 67. Small corbel-roofed tombs.

- a. N. 3053, entrance and roof, from the north. Note limestone chips embedded in mud.
- b. N. 3053, interior from the doorway (from the north).

- Plate 67. c. N. 3071, log over doorway seen from the east. Incline filled with limestone chips; doorway blocked with mud-brick.  
 d. N. 3071, burial and vessels, looking down from the east side.  
 e. N. 3015, substructure with burial, looking down from the east. Note traces of entrance on west side.  
 f. N. 3015, interior with burial and vessels, looking down from the west side.

Plate 68. Burials in boxes and in holes.

- a. N. 3018, looking down from the south side.  
 b. N. 3061, looking down from the east side.  
 c. N. 3091, 3092 and 3093 from the south (see p. 85—87).  
 d. N. 3092 (in the foreground), 3091 (the mud box in the center) and 3093 (in the background), nearer view from the north (see p. 85—87).  
 e. N. 3092,<sup>1</sup> looking down from the west side.  
 f. N. 3091,<sup>2</sup> looking down from the north side. At the top is seen the end of 3093. The beads in the potsherd come from neck of 3091. The wooden cylinder Pl. 43<sup>c</sup>, was in the pot (type IX) on the left.

Plate 69. Miscellaneous views.

- a. N. 3017, same view as Pl. 58, with numbered cards showing tomb numbers of various vessels (see p. 72—73).  
 b. N. 3017, view of vessels in north end from the south. Numbered cards indicate nos. 1—21 (see p. 72—73).  
 c. N. 3013, interior with vessels in place, looking down from above (see Pl. 59<sup>f</sup>, and 60<sup>a, b</sup>).  
 d. N. 3042, inclined corridor and intrusive Coptic stair from the east.  
 e. N. 3051, vessels in place, looking down from the east.  
 f. N. 3023, interior, looking down, from north end.

Plate 70. Stone vessels from corbel-roofed tombs of the second dynasty.

- a. N. 3016. Nos. 7, 15, and 20, are slate: No. 6<sup>a</sup> and 14, are limestone: and the rest are alabaster.  
 b. N. 3031.

DIAGRAM OF VESSELS IN PL. 70<sup>b</sup>.

11	17	3	16	2	1
alab.	alab.	alab.	alab.	alab.	alab.
12	14	7	2 <sup>a</sup>	15	18
alab.	alab.	alab.	yl. lst.	alab.	alab.
	10	8	12 <sup>a, 3</sup>	5 <sup>4</sup>	9
	bl. pol. pottery	volc.	volc.	slate	volc.
	4		30	31	
	alab.		alab.	alab.	

<sup>1</sup> By mistake numbered N. 3091 on Pl. 68<sup>c</sup>.

<sup>2</sup> By mistake numbered N. 3092 on Pl. 68<sup>c</sup>.

<sup>3</sup> Numbered 13 by mistake.

<sup>4</sup> Numbered 12<sup>a</sup> by mistake.



Plate 71. Stone vessels from N. 3017, a corbel-roofed tomb of the second dynasty.

- a. In the top row are plates without rims, two of limestone (65, 49), and two of alabaster (63, 25).

In the second row, 37 and 26 are of limestone with rims; 32 and 35 of alabaster, rimless.

In the third row, 64 (with rim) and 33 (without rim), are of limestone; 62 and 28, alabaster, with rims.

Below, 23 with rim is limestone: 24, with rim, and 47, without rim, are alabaster. Scale 1:6 (7).

- b. In the top row, all are of alabaster.

In the second row, 60 and 41<sup>a</sup> (the upper piece, bowl with spout) are of white and yellow limestone respectively; 39 is a pebble; 34 is of volcanic ash; and the rest are alabaster.

In the lowest row, 54 is of volcanic ash; 22 is red and white breccia, and 31 is slate. Scale 1:6 (6, 7).

Plate 72. Stone vessels from various tomb of the second dynasty.

- a. N. 3001.  
 b. N. 3024, 3054, 3025, 3012, 3011, and 3013.  
 c. N. 3015.  
 d. N. 3052 (four pieces above) and N. 3051 (two pieces).  
 e. N. 3053.  
 f. N. 3022 (three pieces, Nos. 3, 8, 9), 3222, 3471 (three pieces, Nos. 4, 7, 5), 3061, 3003, 3002 and 3261.

Plate 73. Stone vessels, pottery and beads of the second dynasty.

- a. Stone vessels from N. 3150 (four pieces, Nos. 1—4) and 3091. N. 3501 in the lower right corner is of alabaster and comes from an early sixth dynasty tomb in the first ravine.  
 b. Pottery from 3016.  
 c. Beads from 3031, 3061 and 3018.

Above, on the left, 3031, 6 and 13<sup>a</sup>, see p. 76.

In the middle, 3061, 2, see p. 86.

Below, N. 3018, 4, see p. 85.

Plate 74. Pottery from tombs of the second dynasty.

- a. Pottery from various tombs, 3061, 3071, 3014, 3091, 3003, 3018.  
 b. Pottery from 3017.

Plate 75. Miscellaneous views.

- a. N. 3025, looking down from the west.  
 b. Pottery from 3052 and 3023. Scale 1:6.  
 c. Pottery from 3022, 3051, and 3053. Scale 1:6.  
 d. Stone vessels, 3150 in place between N. 3001 and 3021, from the south.

Plate 76. Map I. Map of Cemetery 1500, scale 1:526.<sup>1</sup> The corbel vaults are represented in red which marks roughly therefore the second dynasty tombs. The tombs later than the second dynasty are shaded. The shaded tombs north of 1647 in strips w and x are of the 12—18 dynasty. Below is a section through A. B., and a section showing the elevation of the surface through the lines v—z. In the list of tombs on p. 139, the strips v—z are those in which these letters stand on this map (i. e. on the right of the lines v—z); strip A is the end strip on the left; strip 1 is the part below line A—B, and strip 2 is the part above line A—B.

Plate 77. Map II. Plan of the group of tombs N. 1506, 1514 and 1584. Scale 1:122.<sup>2</sup>

The substructures are shaded; the superstructures are hatched; the restored outlines are indicated by dotted lines.

Plate 78. Map III. Map of Cemetery 3000.

Structures and pits in red are later than the second dynasty. In the list of tombs on p. 139, the strips A—C, C—B, B—D, D—A are the segments between the lines bearing those letters.

Plate 79. Map IV. General map of the site of Naga-ed-Dér. Made by F. W. GREEN, added to by G. A. REISNER, and finished and inked in by N. de G. DAVIES.

<sup>1</sup> Scale 1:500 was intended, but the map was inaccurately reduced by the printer.

<sup>2</sup> Scale 1:100 was ordered, but 1:122 resulted from inaccurate reduction by the printer.





## CORRECTIONS.

On p. 3, marginal note at bottom, instead of  
**Sebah digging** read **Sebah digging**.

" " 4, l. 17, instead of  
**sebbhâin** read **sebbâhîn**.

" " 7, l. 15 from below, instead of  
**1508** read **1608**.

" " 7, l. 3 from below, omit **3023** (the next to  
the last number in the line).

" " 14, l. 5 from below, instead of  
**1521** read **1621**.

" " 21, l. 6, instead of  
**Bowls** read **Bowl**.

" " 39, l. 12, instead of  
**typc VI** read **type V (?)**.

" " 65, l. 13 from below, instead of  
**and four are holes in the ground (3019,  
3092, 3033, 3025)**  
read:

**and three are holes in the ground  
(3019, 3092, 3025).**

" " 95, l. 8 from below, instead of  
**b = 1522, 1.** read **b = 1522, 3.**

" " 95, l. 6 from below, instead of  
**b = 1522, 3 and \*1586, x.**  
read **b = 1522, 1 and \*1586, x.**

On p. 101, under Type I a 6 read:

**a 6 = 1513, 40, 48; 1586, x; 1612, x.**

" " 101, under Type I c 4, read:

**c 4 = 1513, 27, 64; 1514, 29; 1582, x;  
3015, 1.**

" " 108, under Type XVII b 23, instead of  
**1572, 8 (v.)** read **1571, x 18 (v.)**.

" " 109, under Type XVIII 5, instead of  
**1572, x (v.)** read **1571, x 11 (s.)**.

" " 109, under Type XVIII 12, instead of  
**1572, x (s.)** read **1571, x 15 (s.)**.

" " 119, in list of cylinder seals under **43 o | 44 o**,  
instead of **1562, 3** read **1605, 1**.

and under **43 k | 44 k** instead of  
**1605, 1** read **1562, 3**.

On Pl. 44 below on left, instead of **p** read **k**.

" " 55a, instead of **N 1527** read **N 1521**.

" " 68e, " " **N 3091** " **N 3092**.

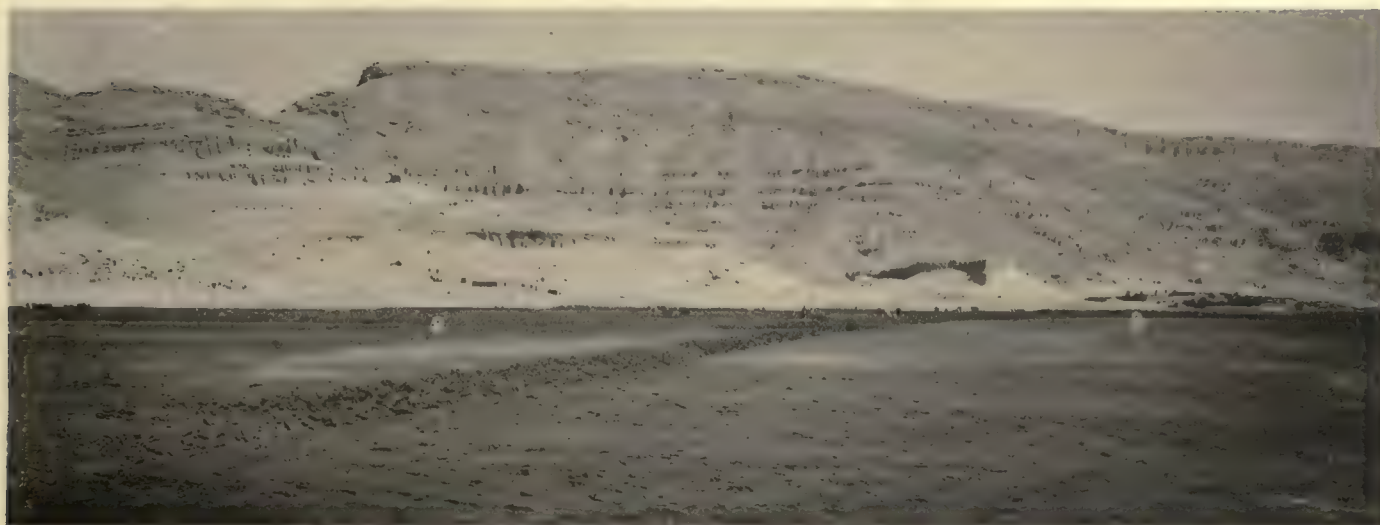
" " 68f, " " **N 3092** " **N 3091**.

" " 70b, " " **13** read **12a**  
and **12a** read **5**.





a. View looking north. S. Sheikh Farag. 1. The first ravine.



b. View continuous with a. 2. Second ravine. 3. Third ravine.

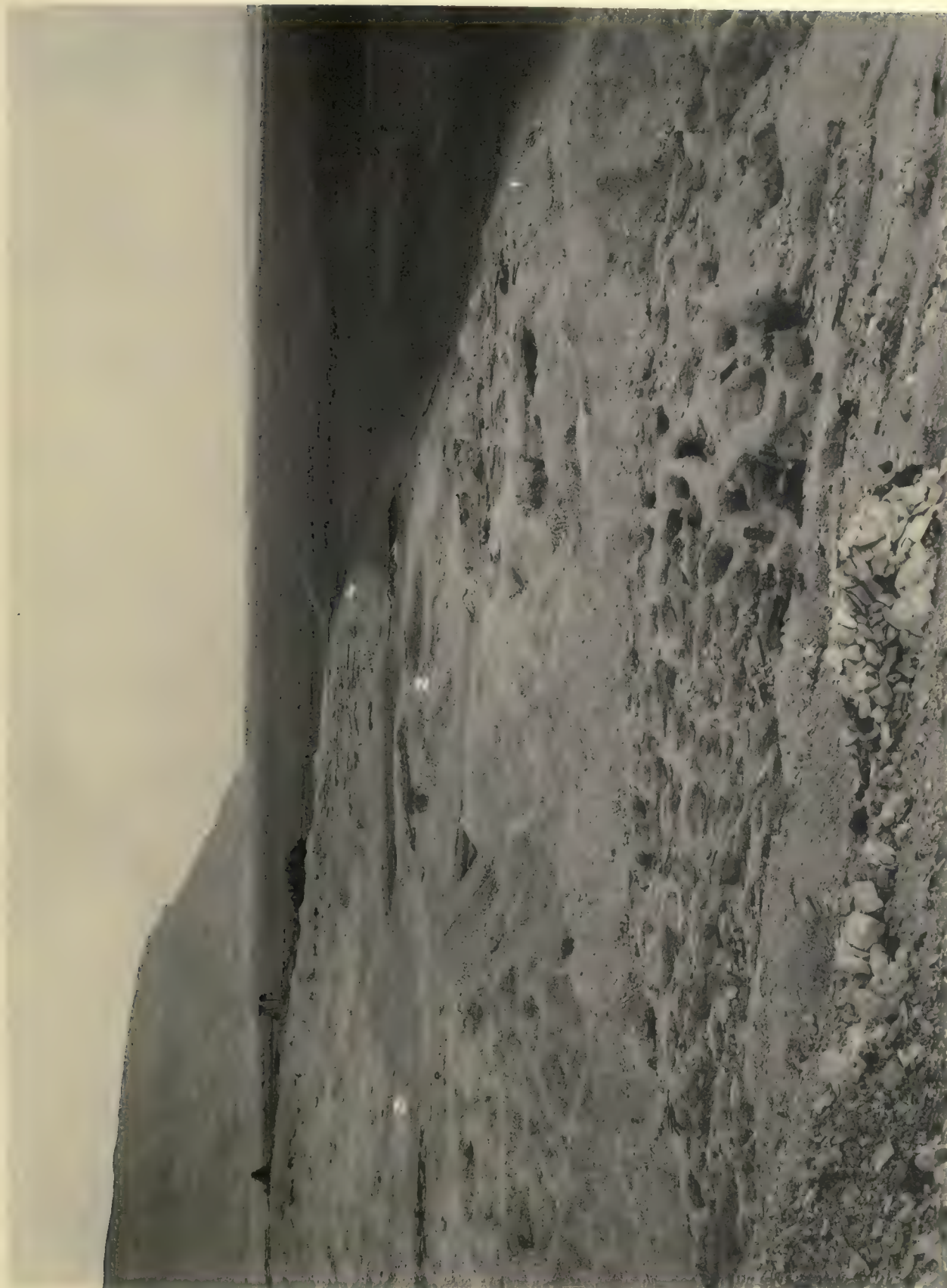


c. View of desert between second and third ravine, looking northeast.





## Early Dynastic Cemeteries I.

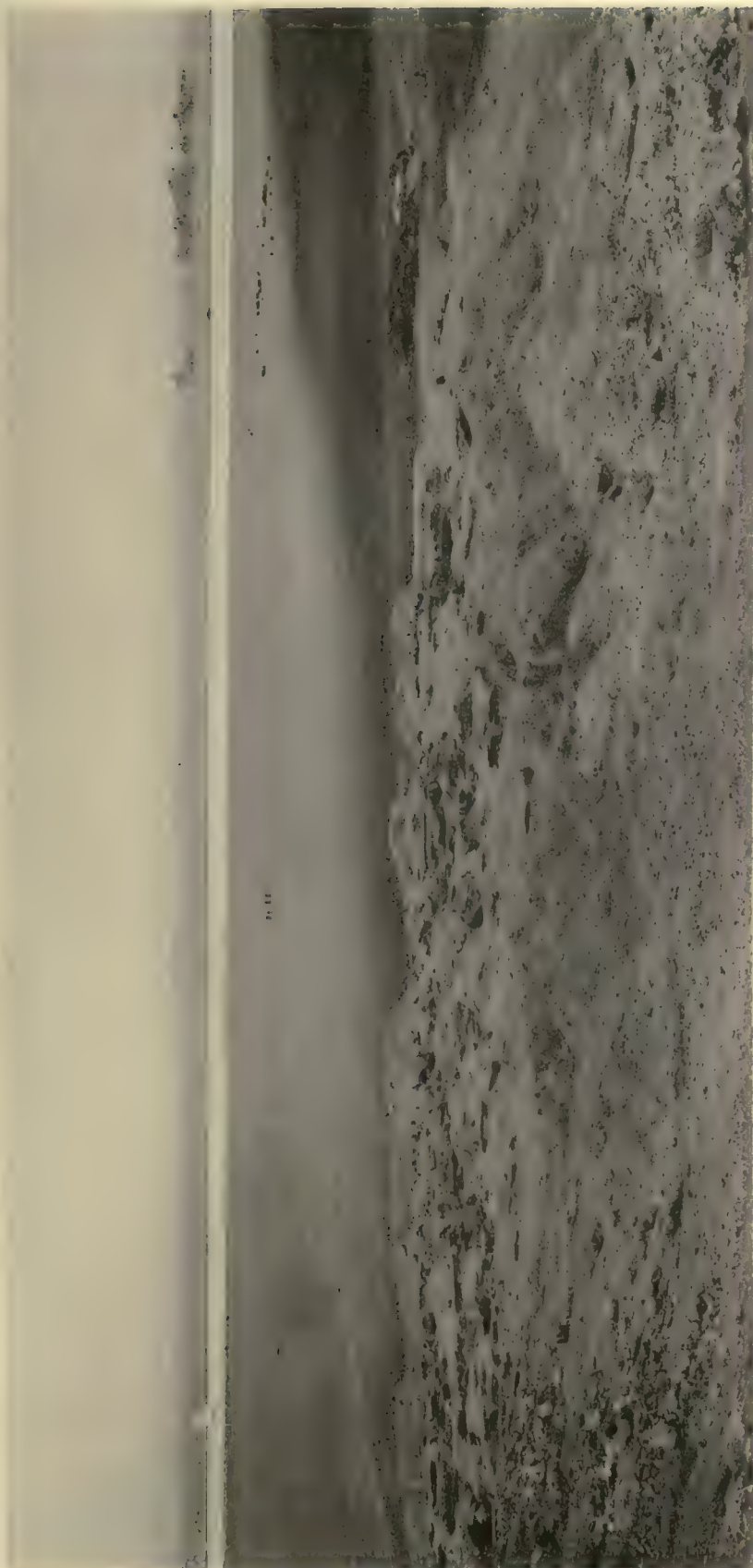


View looking south over cemeteries 3000 and 1500.

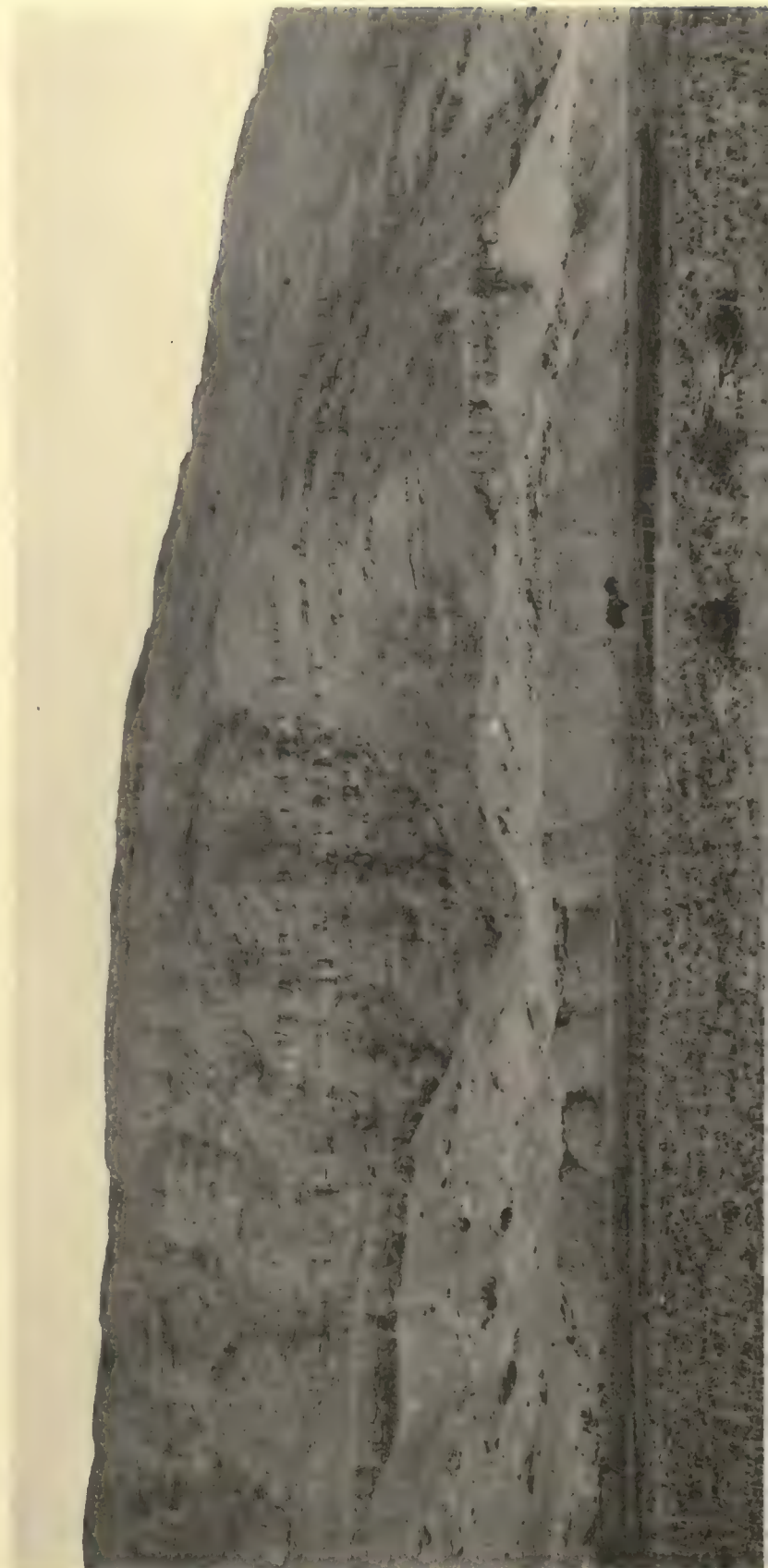




## Early Dynastic Cemeteries I.



a. Cemetery 1500 from the east.







## Early Dynastic Cemeteries I.



N. 1532. View from above from the west side.







a. The head with the circlet and the necklace.



b. The gold with the remains of the skeleton.



c. Chambers A, B and C.

N. 1532. The gold find in position.





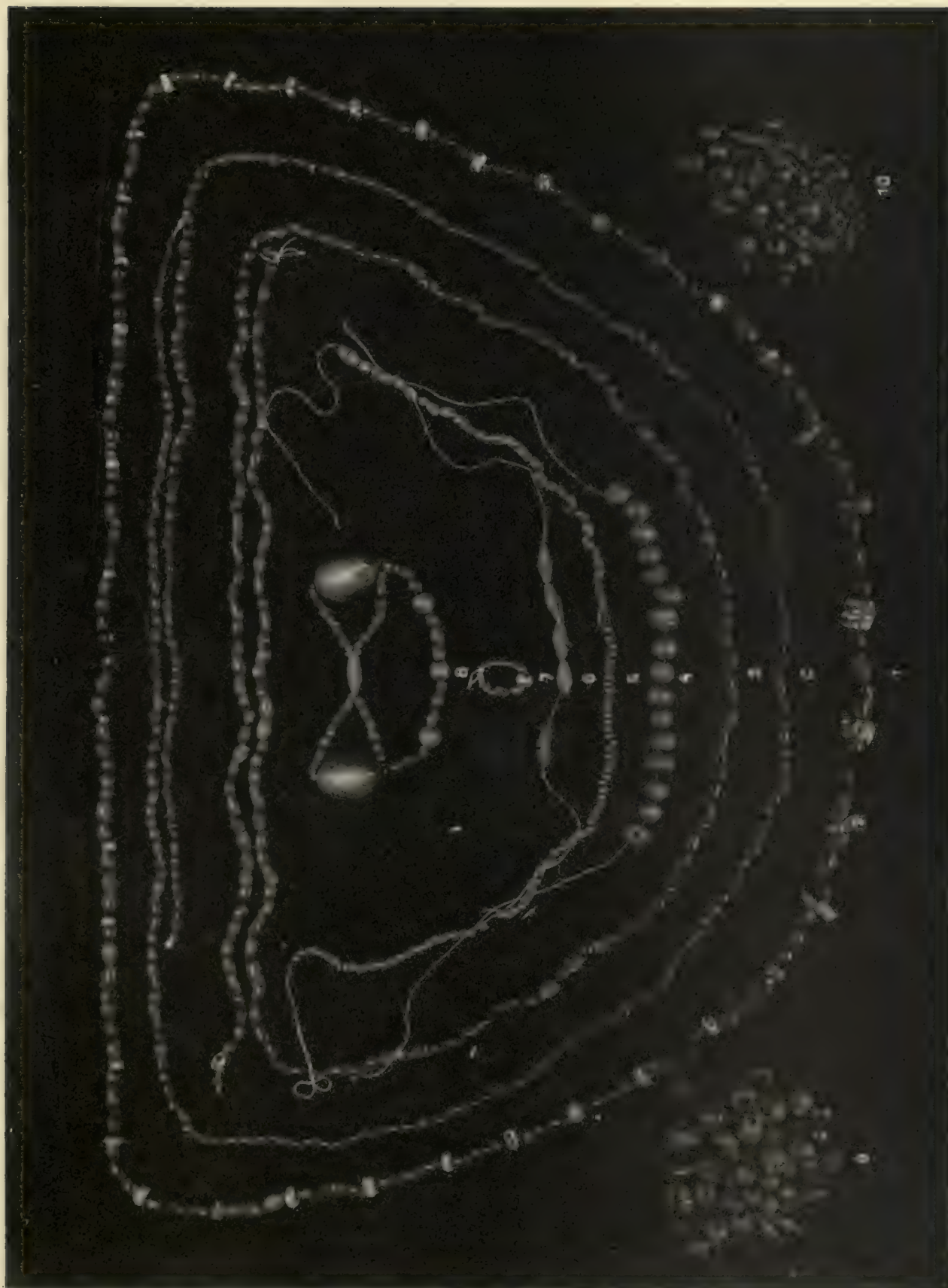
## Early Dynastic Cemeteries I.



N. 1332. Gold beads and ornaments.





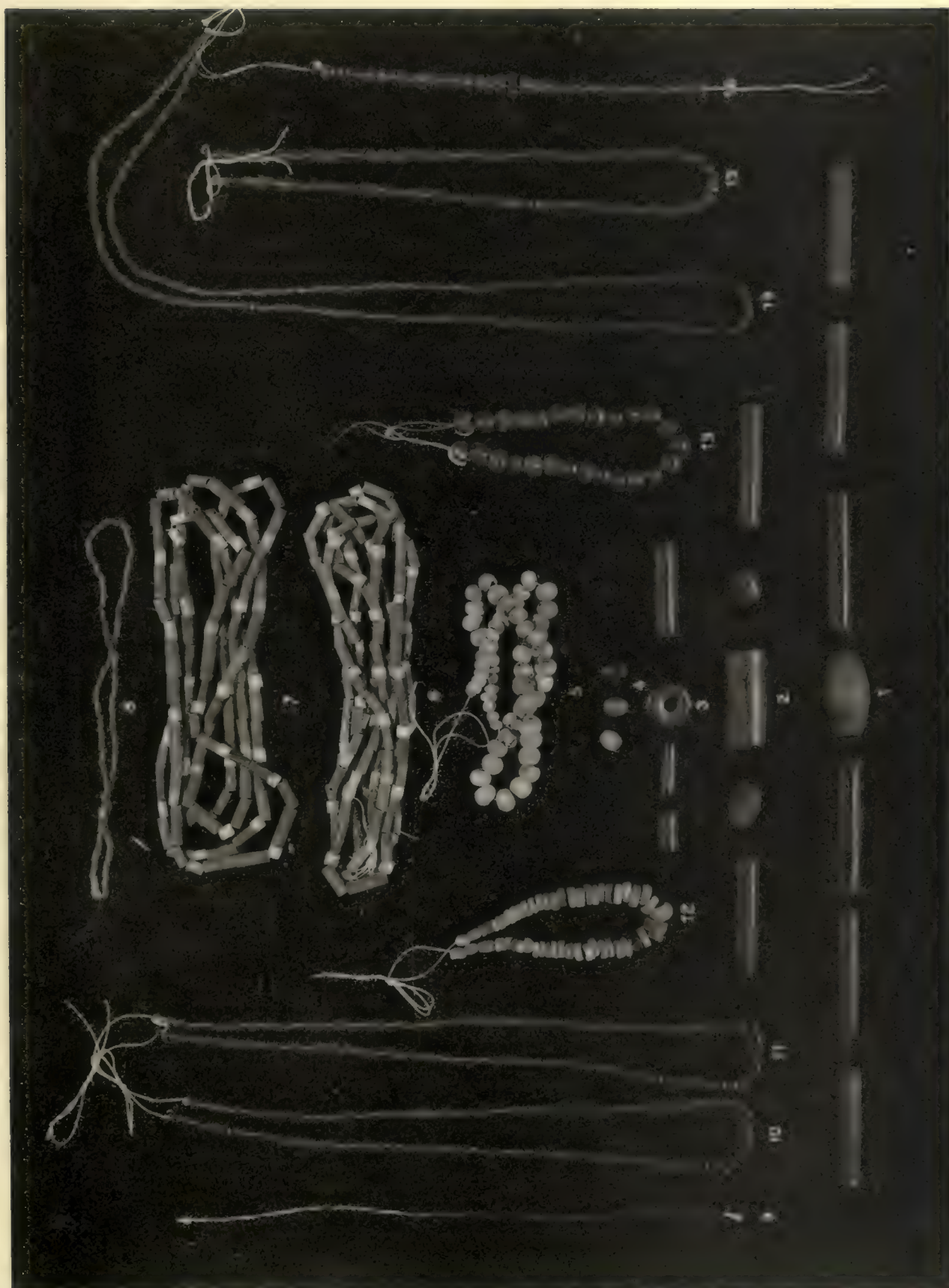


N. 1532. Gold and stone beads.





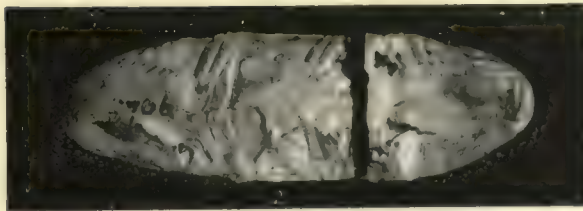
## Early Dynastic Cemeteries I.



N. 1532. Glazed and stone beads.



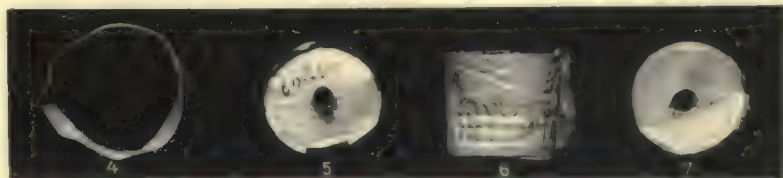
1875



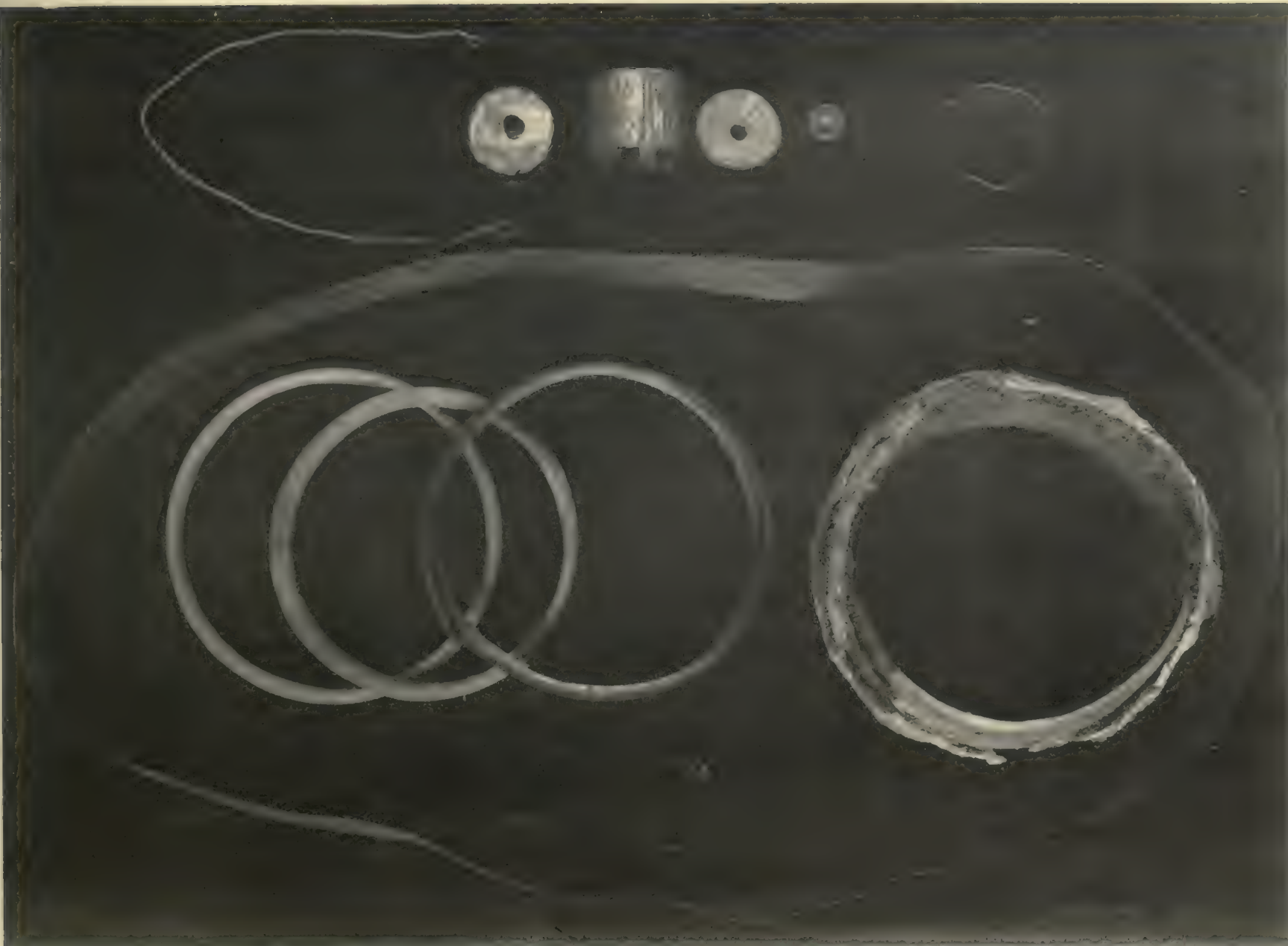
a. Reverse of Pl. 6 nos. 1, 2 and 3.



b. Gold rings.



c. Gold cylinder and case (4).



d. Gold wire, cylinder and case. Gold circlet. Flint, slate, gold and copper bracelets.

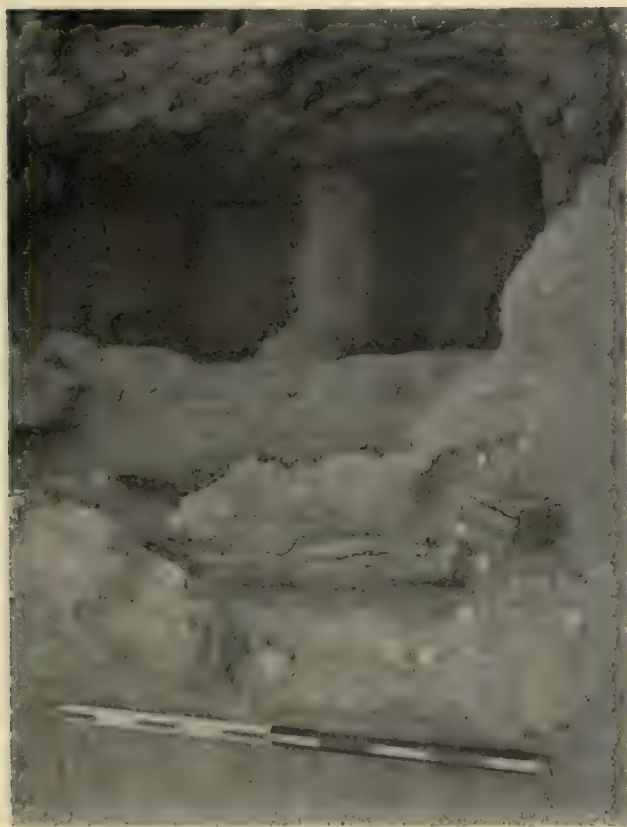




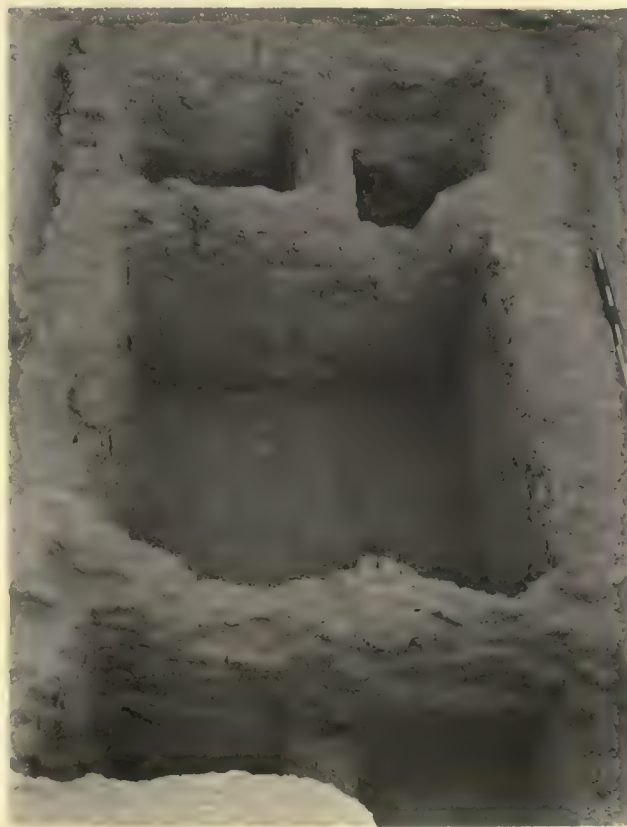
## Early Dynastic Cemeteries I.



a. N. 1533. From the north end.



b. N. 1506. Logs of second roof, seen from above.

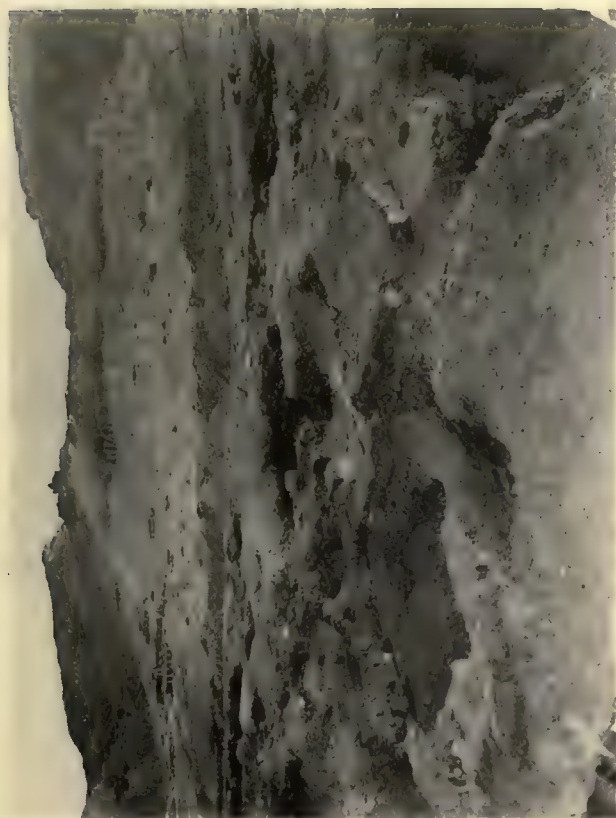


c. N. 1506. Substructure, from the north end.

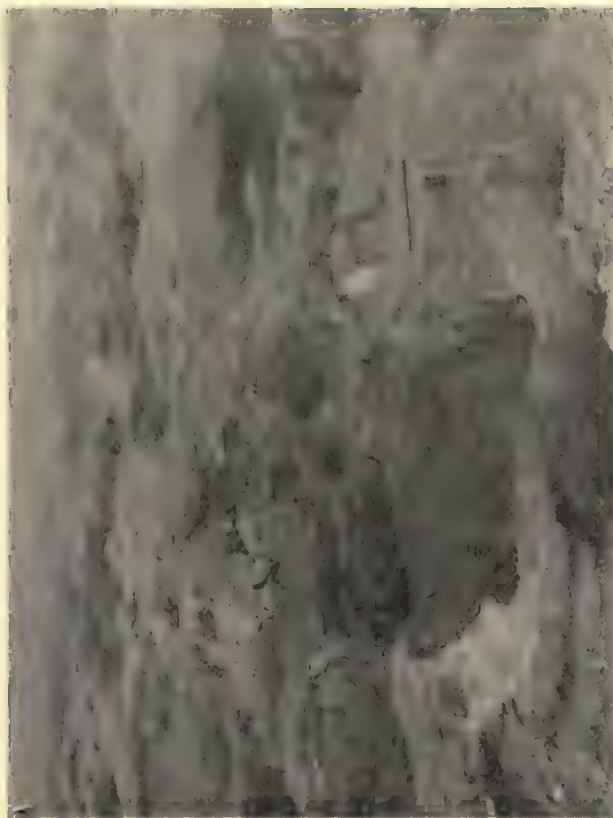




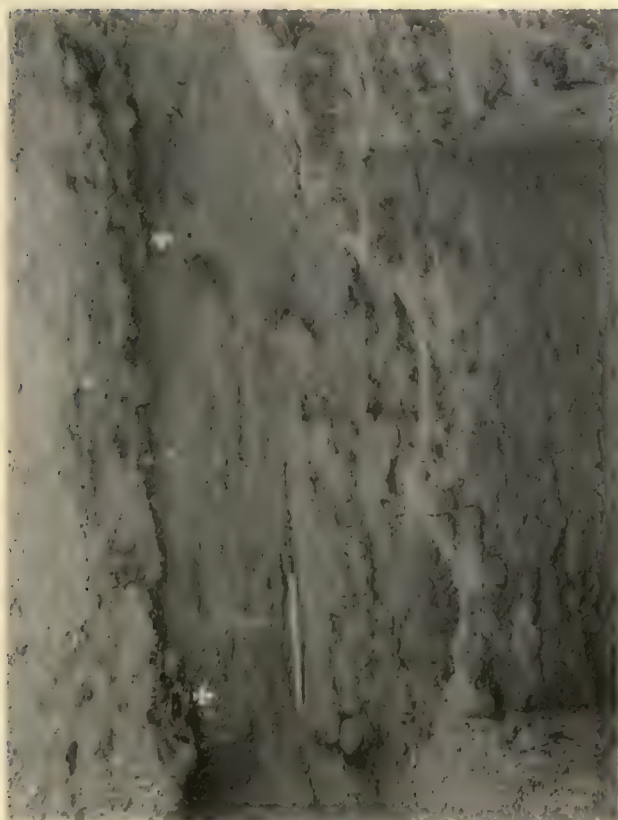
## Early Dynastic Cemeteries I.



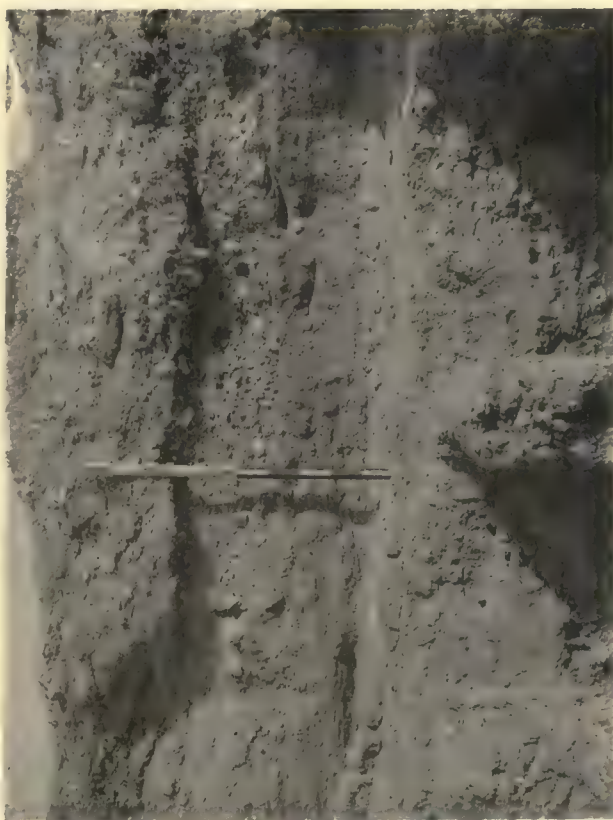
a. N. 1506. Superstructure from south west.



b. N. 1506. Superstructure, entrance.



c. N. 1506. Wooden roof \*.



d. N. 1621. Strata and debris, south end.

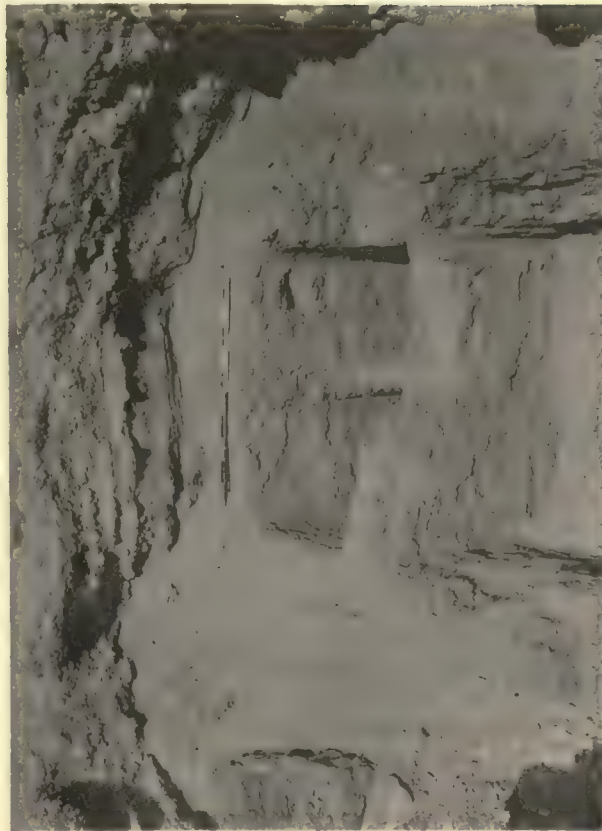




## Early Dynastic Cemeteries I.

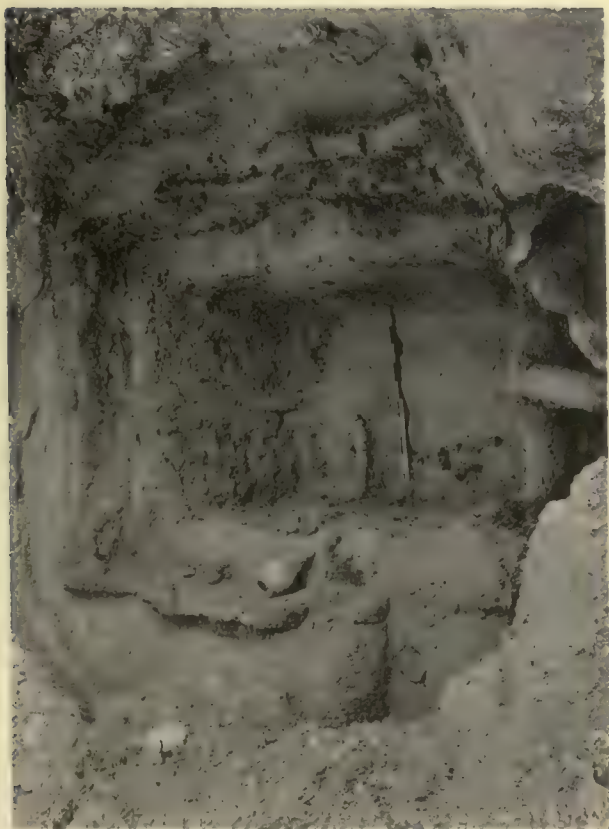


a. N. 1624. From the north.

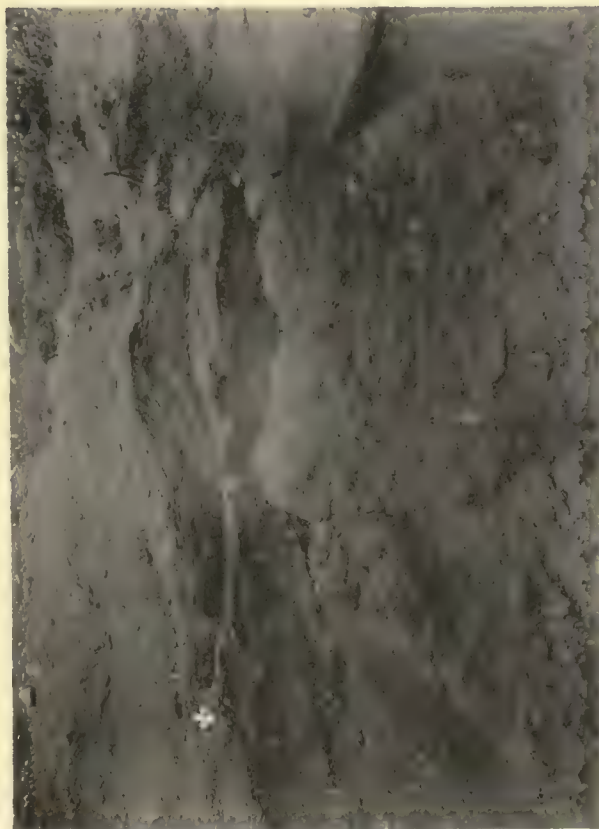


b. N. 1624. From the south.

\*



c. N. 1608. From the north.



d. N. 1608. Wooden beam, north end.

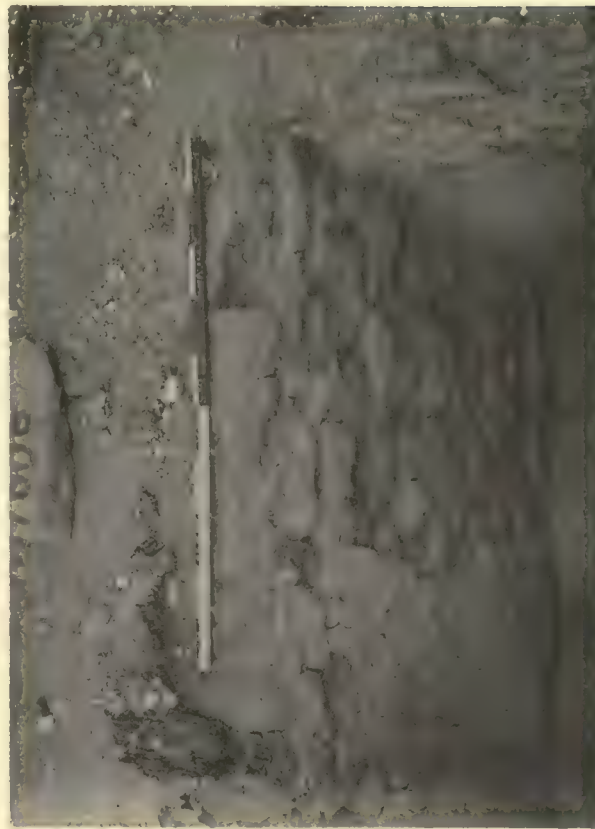




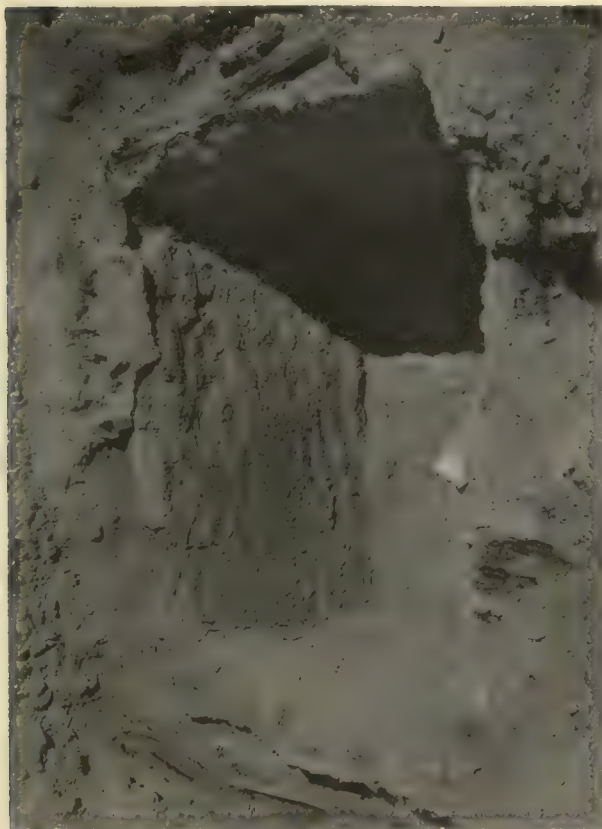
# Early Dynastic Cemeteries I



a. N. 1606. From the east.



b. N. 1606. Brickwork, west side.



c. N. 1643. From the west.



d. N. 1501. From the west.







a. N. 1604. Remains of skeleton on floor, from north.



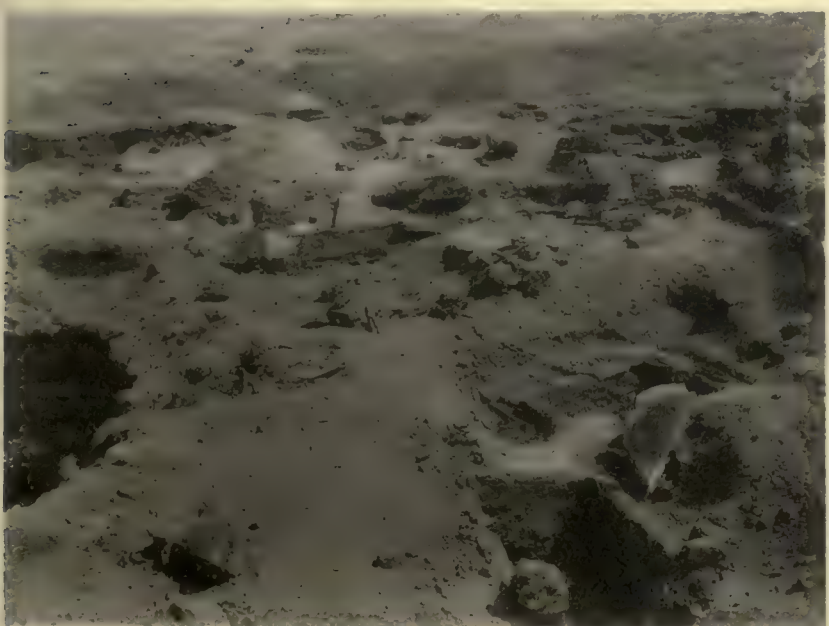
b. N. 1582. From the north.



c. N. 1640. From the west.



d. N. 1538 a. Under enclosing wall of 1506. From the south.



e. Cem. N. 1500. Looking east between 1513 and 1584.



f. N. 1607. From the south.

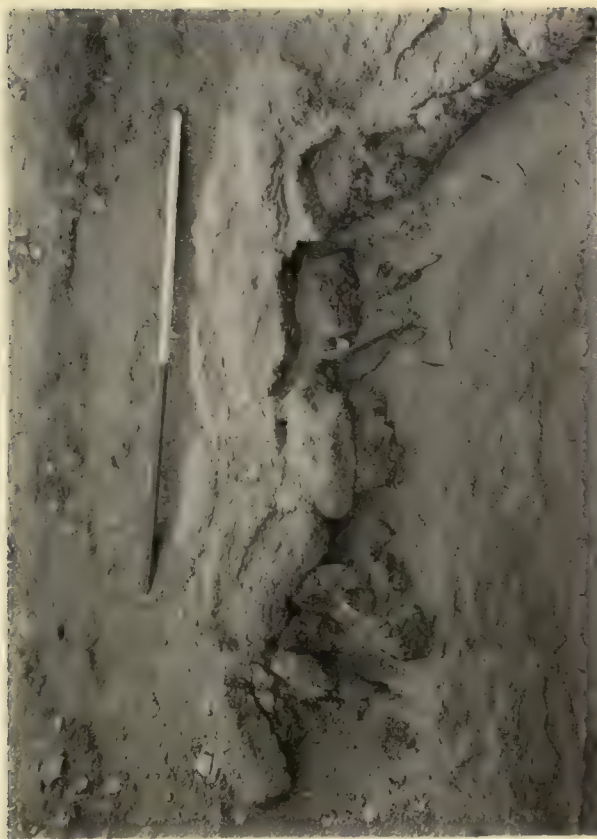




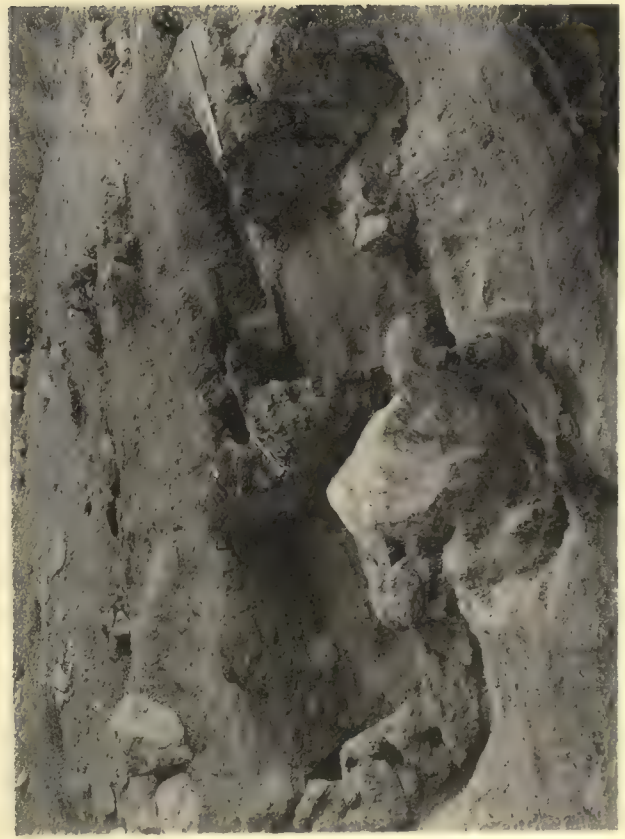
Early Dynastic Cemeteries I.



a. N. 1647. From above, from the south.



b. N. 1647. Roofing on westside.



c. N. 1639. From the north.





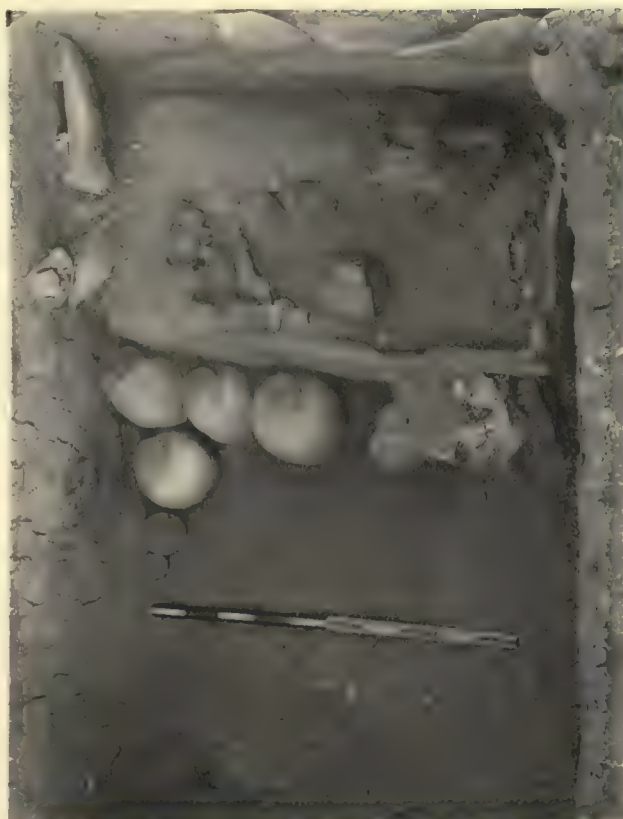
# Early Dynastic Cemeteries I.

N



a. N. 1525. Boxes I and II from the east side.

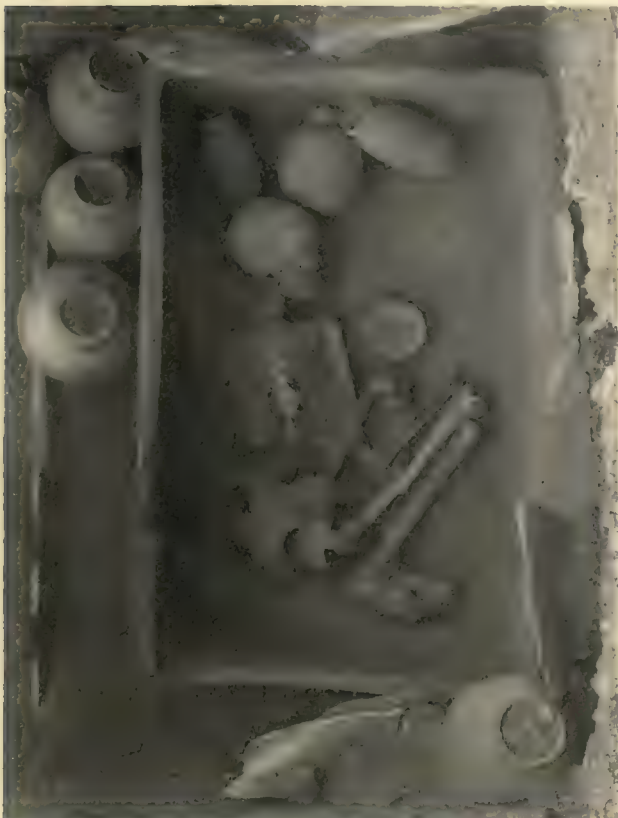
S N



b. N. 1525. Box II from the west side.

S

E



c. N. 1525. Box II burial, from the west side.

N



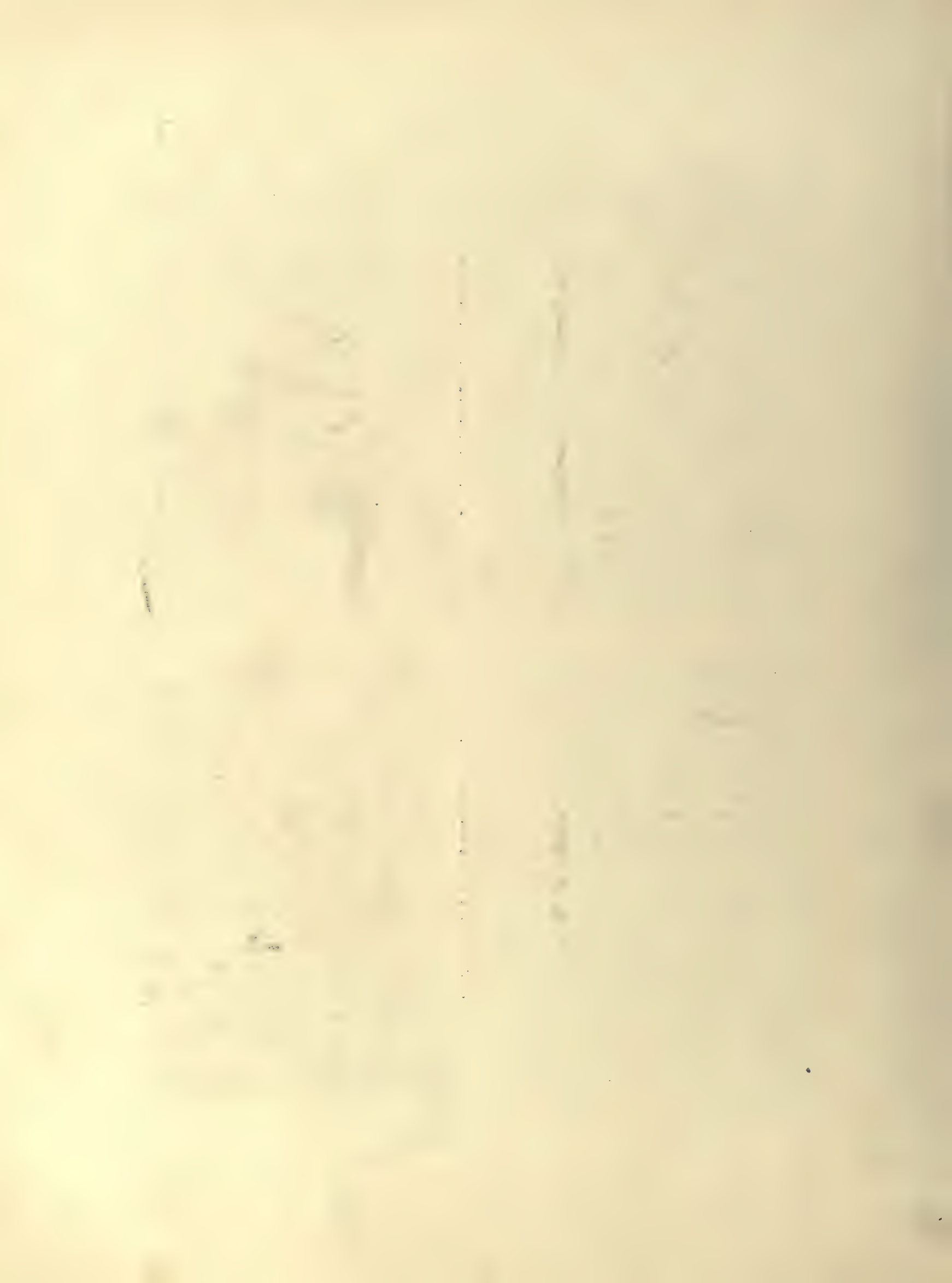
d. N. 1646. From the west end.

\*

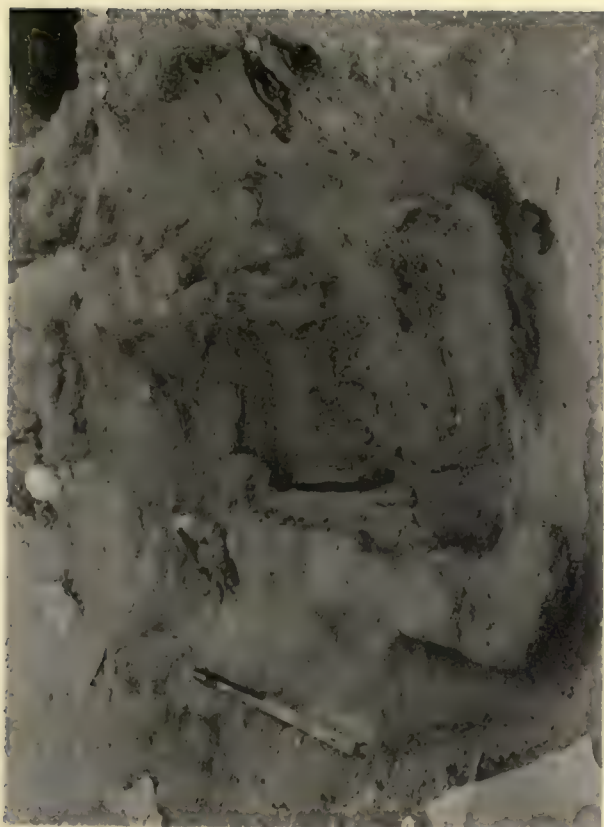
S

W





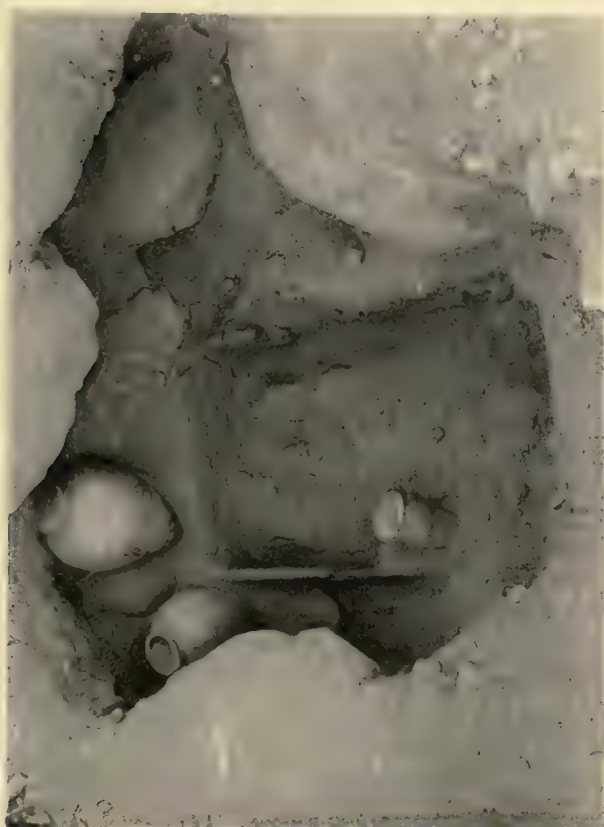
## Early Dynastic Cemeteries I.



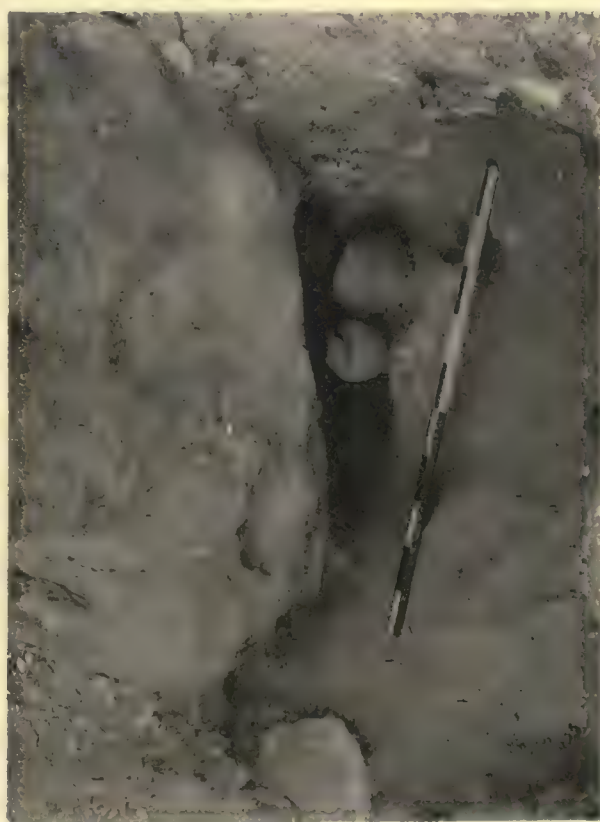
a. N. 1582. Wooden box from the north.



b. N. 1536. Mud box from the east.



c. N. 1602. Mud box from the east.



d. N. 1522. Under a boulder, from the south.





## Early Dynastic Cemeteries I.



a. N. 1535. From the east.



b. N. 1536. From the east.



c. N. 1635. From the south.



d. N. 1645. From the east.

\*





## Early Dynastic Cemeteries I.



N 1512. Substructure, from the east side, after clearing.





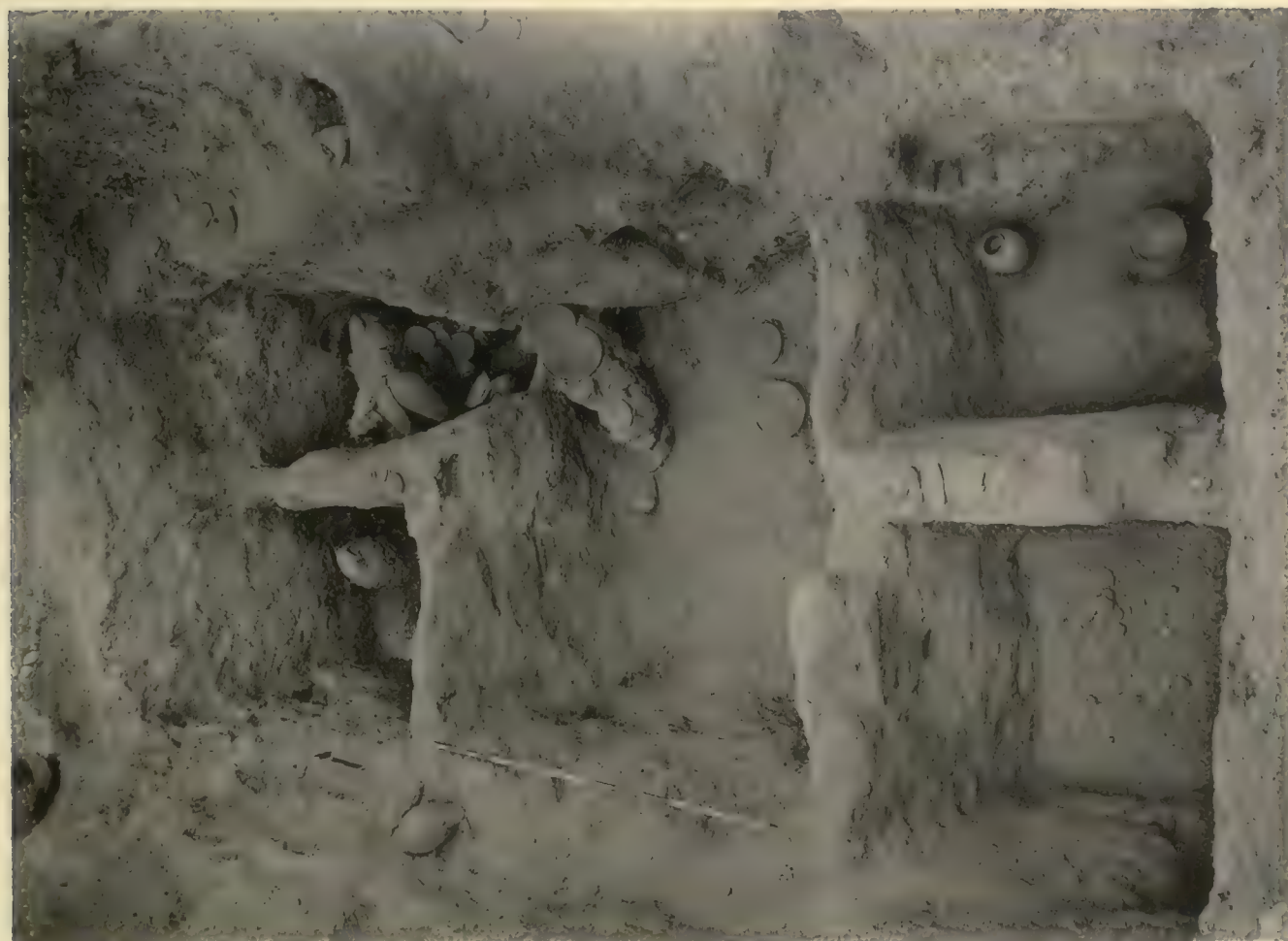
## Early Dynastic Cemeteries I.



a. N. 1512. Doorway, bricked up.



b. N. 1512. SW chamber, from above.



c. N. 1512. From the north. Pottery and stone vessels in position.





## Early Dynastic Cemeteries I.



N. 1581. View of substructure from the west side.



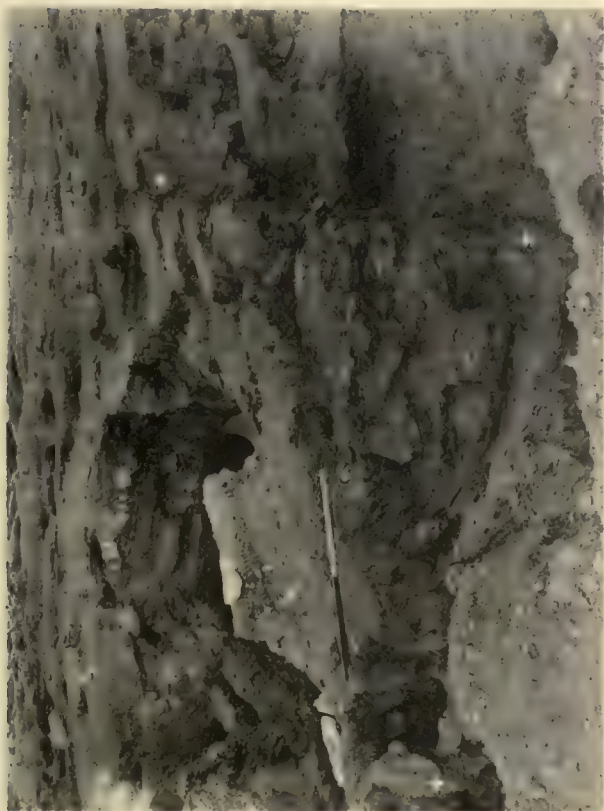


## Early Dynastic Cemeteries I.



a. N. 1581. From the south, retaining wall of double roof.

\*



b. N. 1581. Superstructure from the south.

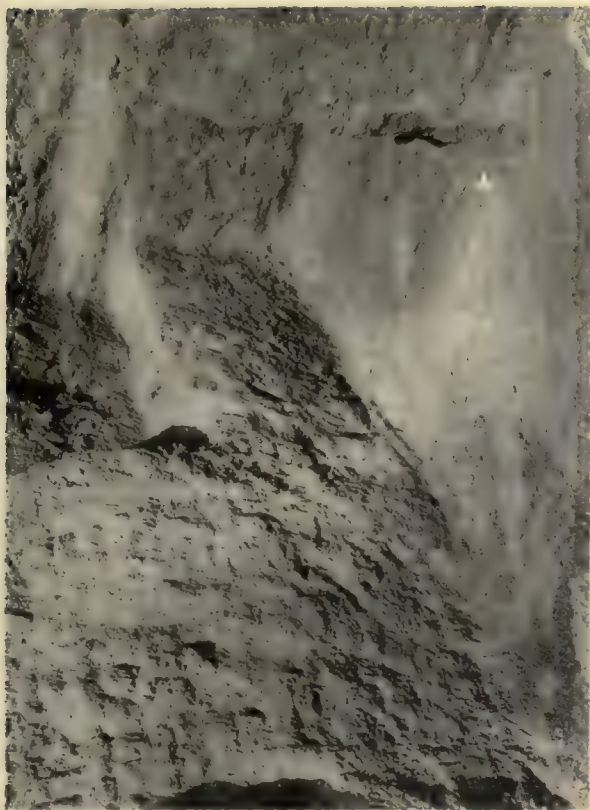


c. N. 1581. Superstructure near view of niches on southern face cut by coptic burial.





## Early Dynastic Cemeteries I.



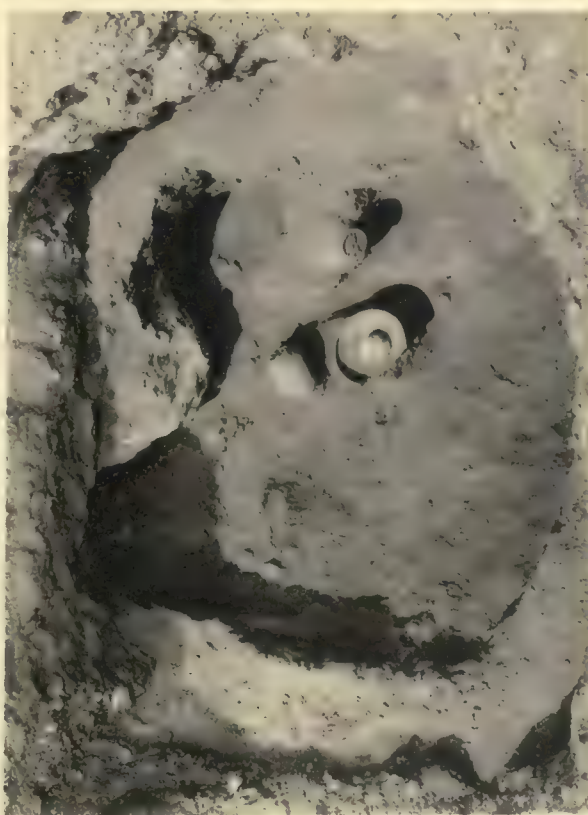
a. N. 1581. NW chamber, flint knife \*.



b. N. 1581. From the north.



c. N. 1592. From the northeast.



d. N. 1529. From above.







N. 1513. Substructure with contents from the east side.





## Early Dynastic Cemeteries I.



N. 1513. Substructure with contents from the west side.





Early Dynastic Cemeteries I.



a. N. 1513. In process of excavation.



b. N. 1513. North end with remains of skeleton.



c. N. 1513. From north, showing brickwork.

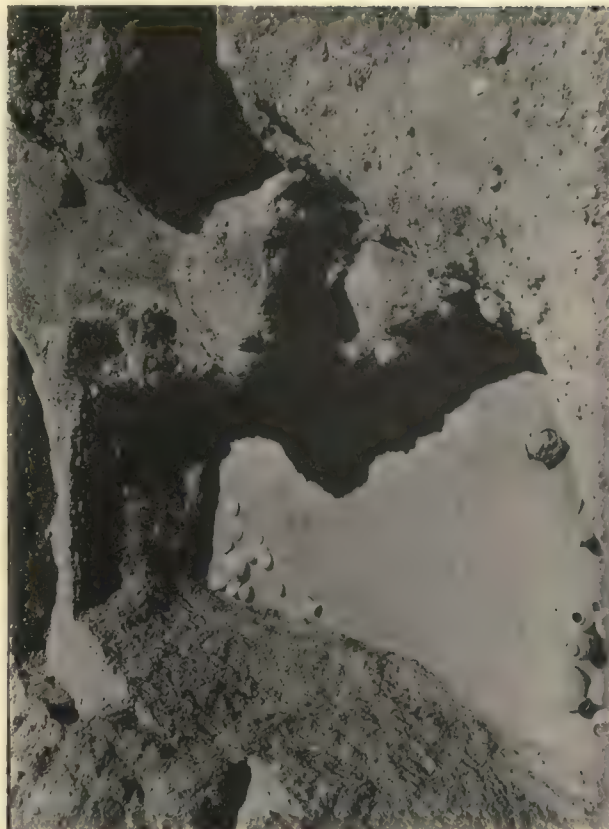




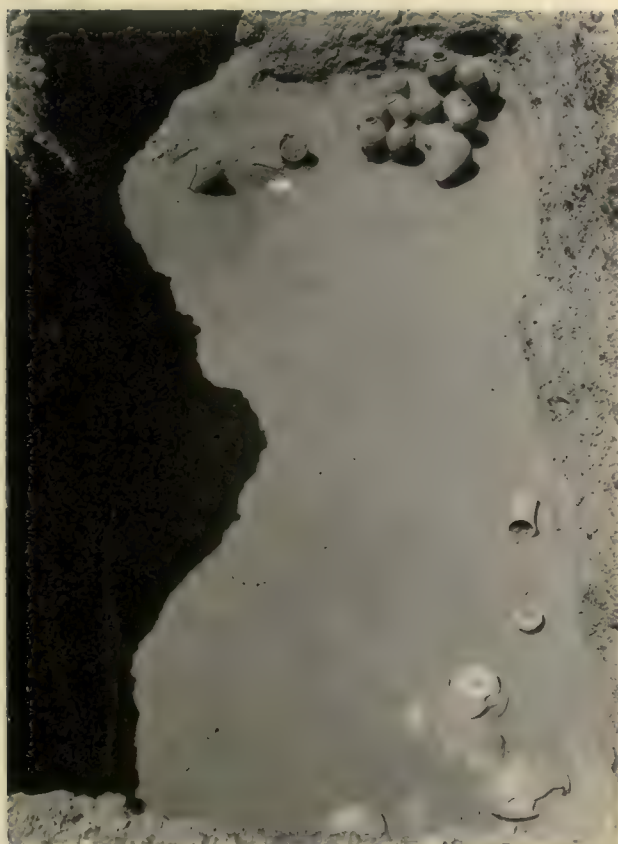
## Early Dynastic Cemeteries I.



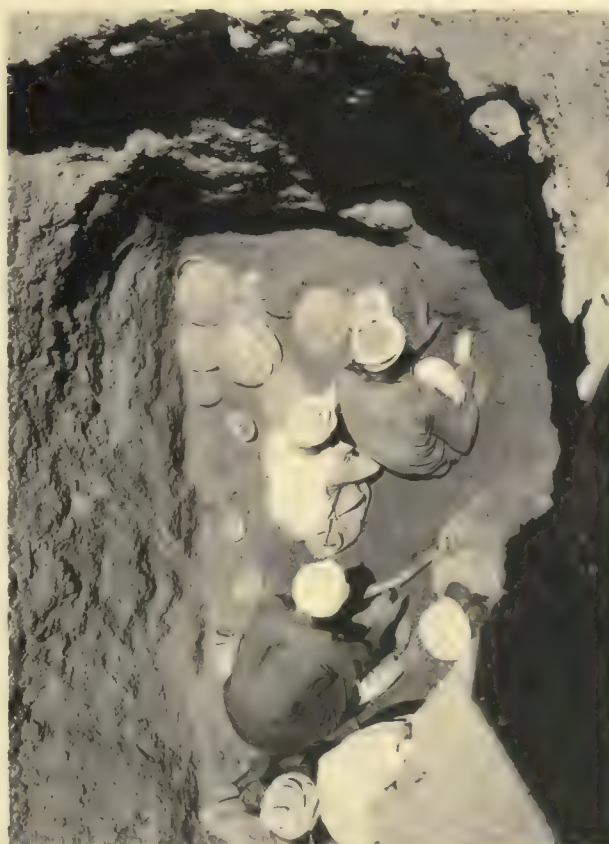
a. N. 1514. From the east.



b. N. 1514. From the north.



c. N. 1514. From the south with flint knife ✱.



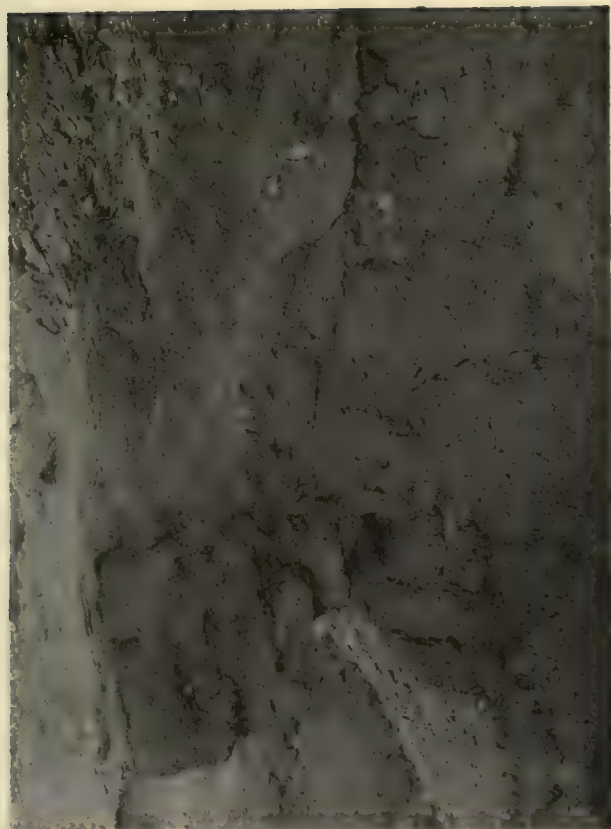
d. N. 1514. South end, from above.

✱

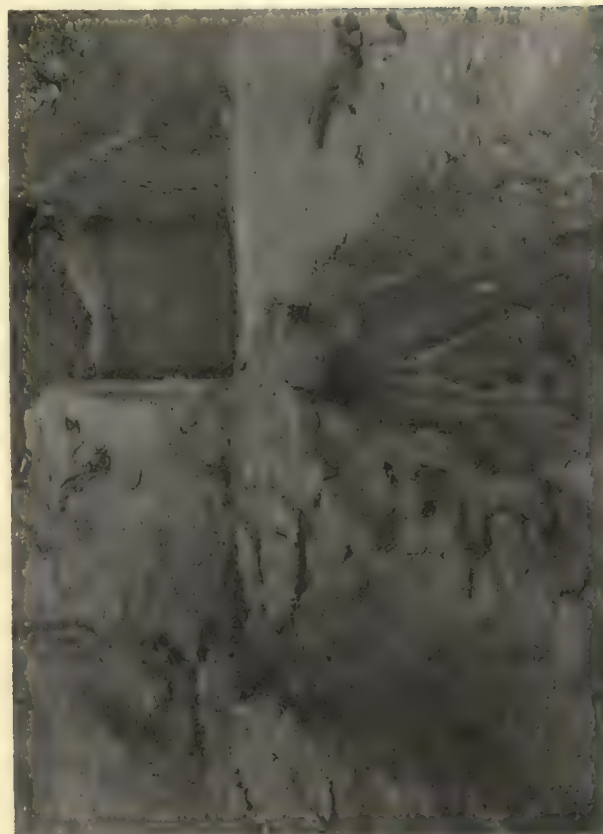




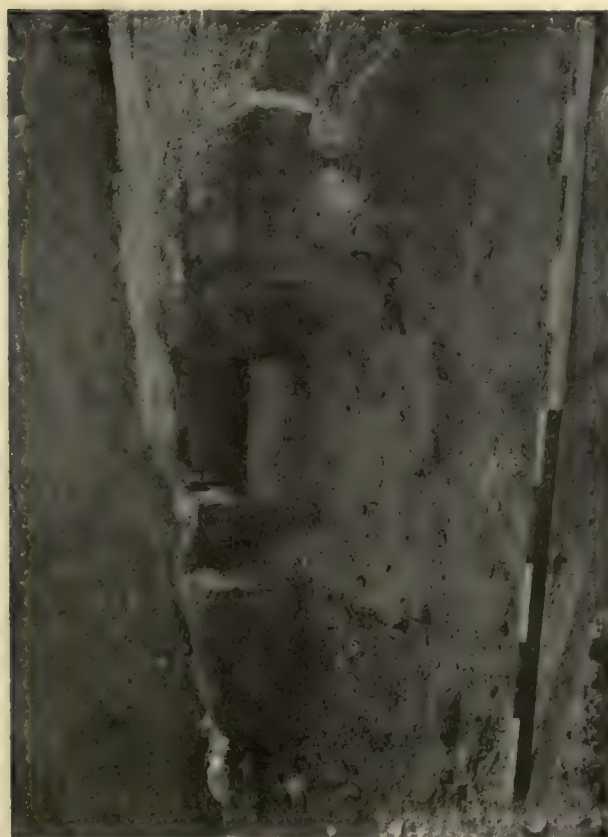
# Early Dynastic Cemeteries I.



a. N. 1514. South side of doorway.



b. N. 1514. Stairway and N. 1584 south end of vault.



c. N. 1514. Offering niche from the west.

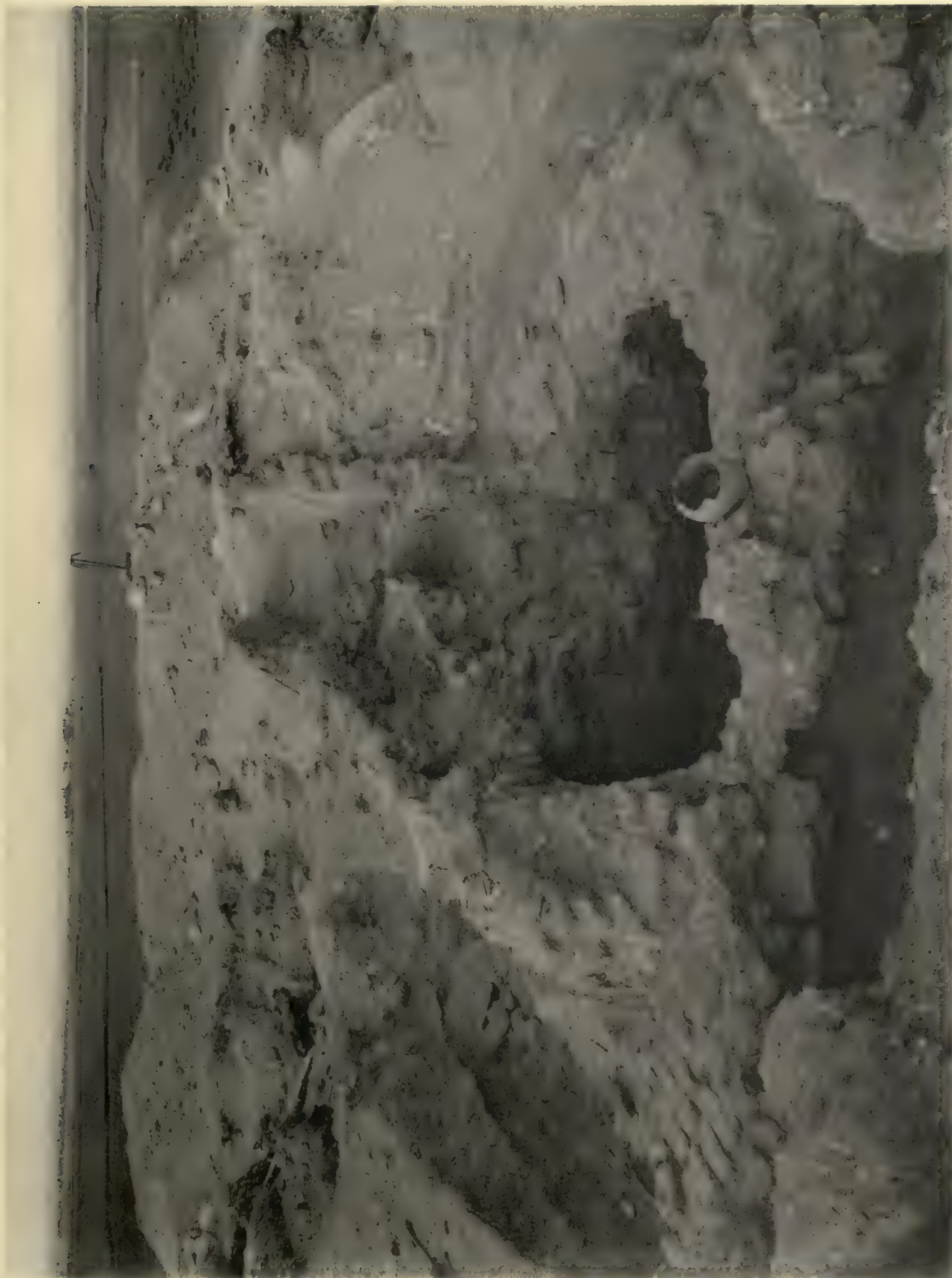


d. N. 1514. Superstructure from the south.





## Early Dynastic Cemeteries I.

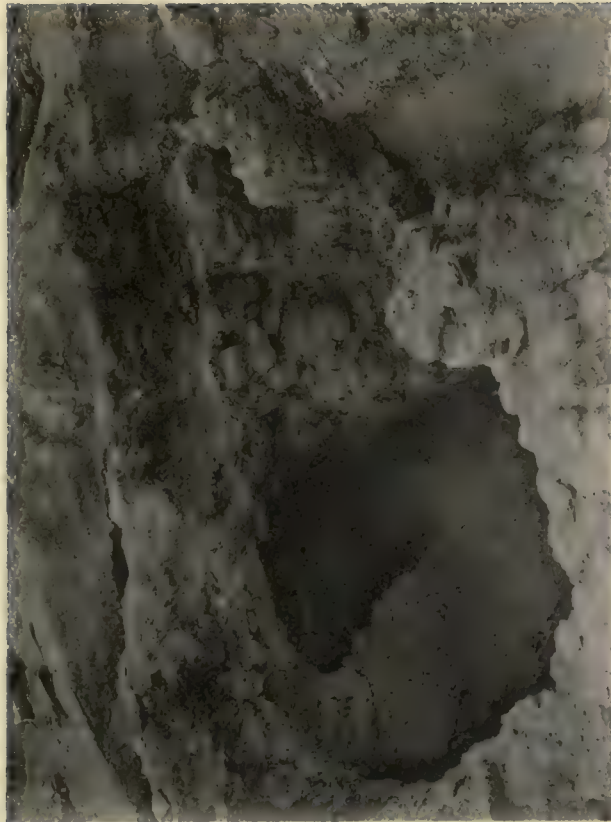


N. 1584. Substructure from the east side.





# Early Dynastic Cemeteries I.



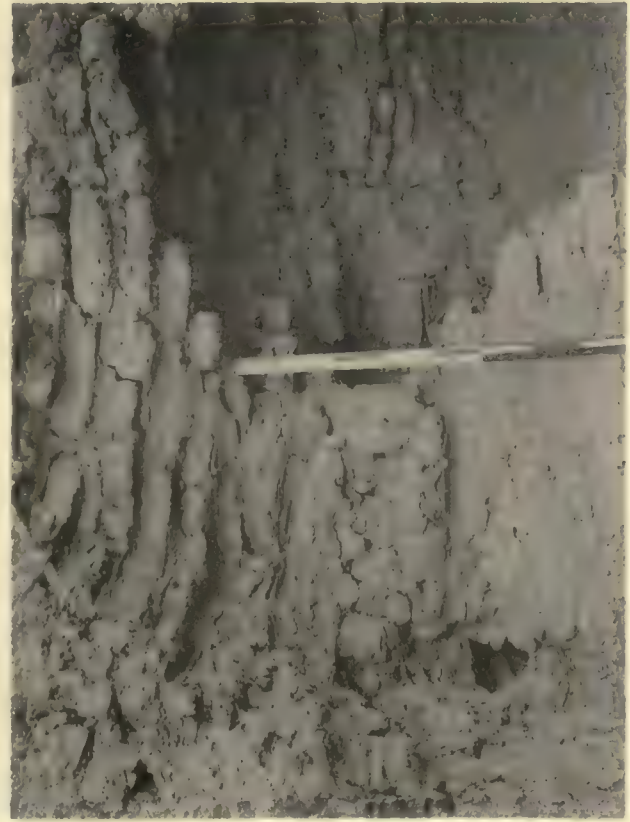
a. Dividing wall and doorway from the north.



b. Remains of wooden roof of doorway ✕. Coptic bones.



c. Stairway and blocked entrance. Wooden log crosses at top of meter.



d. Brickwork at southeast corner of main chamber.

N. 1584. Structural details.

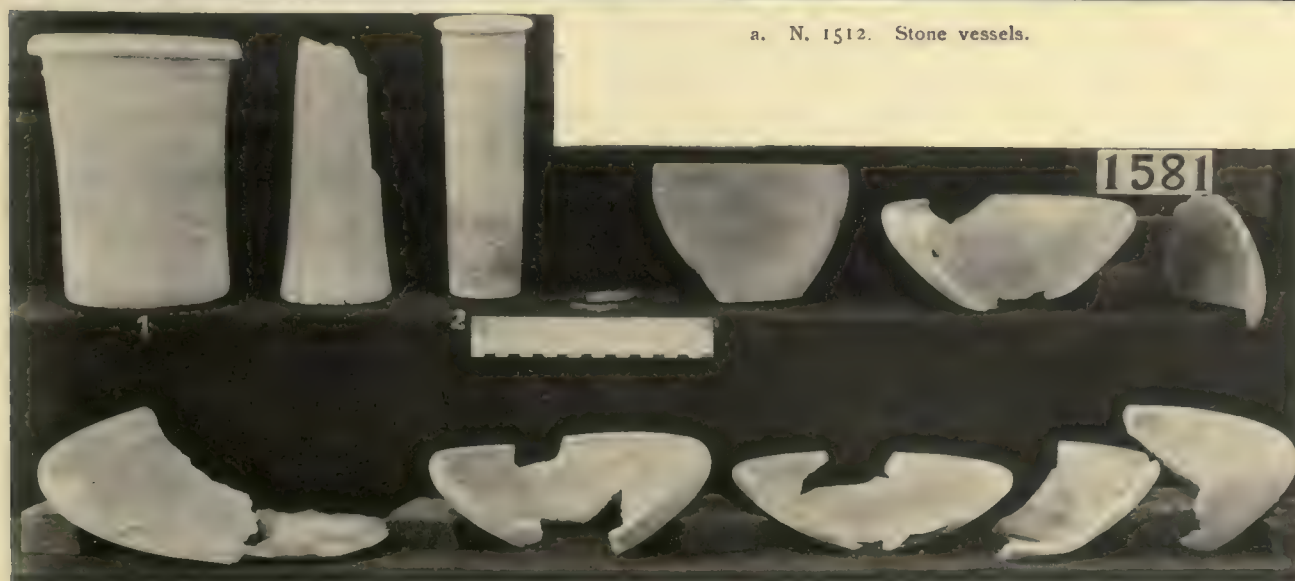




## Early Dynastic Cemeteries I.



a. N. 1512. Stone vessels.



b. N. 1581. Stone vessels.







a. N. 1532. Stone vessels.



b. N. 1513. Stone vessels.

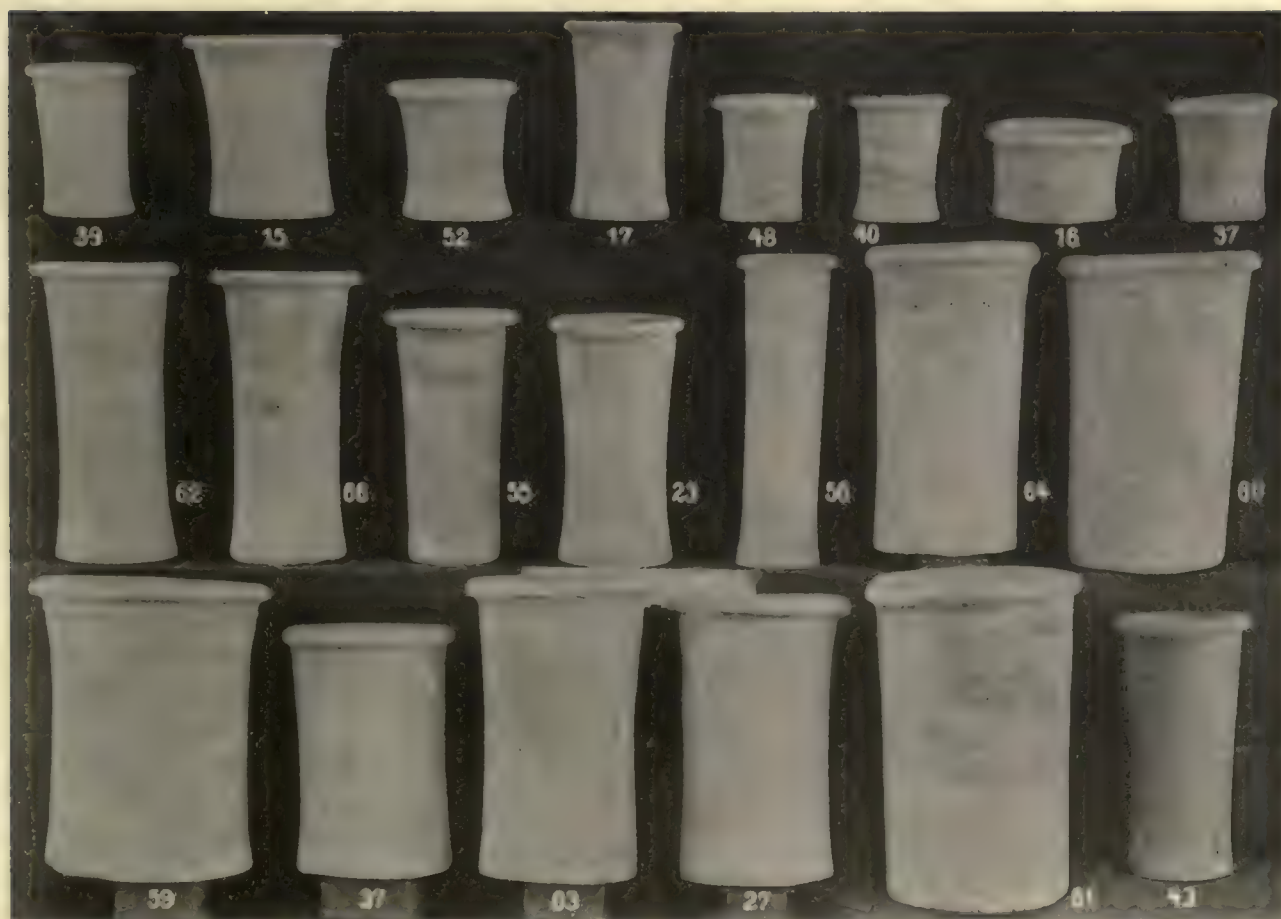




## Early Dynastic Cemeteries I.



a. N. 1513. Alabaster.



b. N. 1513. Alabaster.





## Early Dynastic Cemeteries I.



a. N. 1586. Stone vessels.



b. N. 1514. Stone vessels.







a. N. 1526. Volcanic ash, slate and other stone vessels.

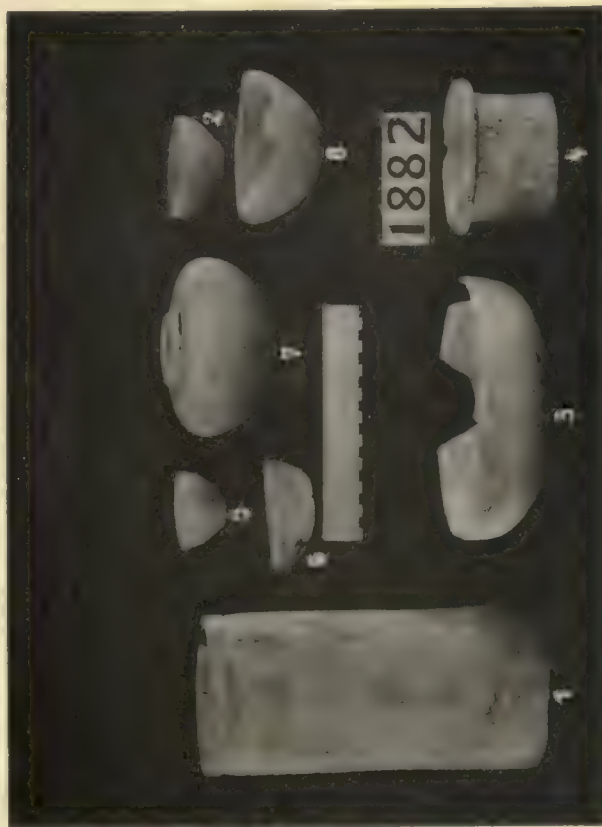
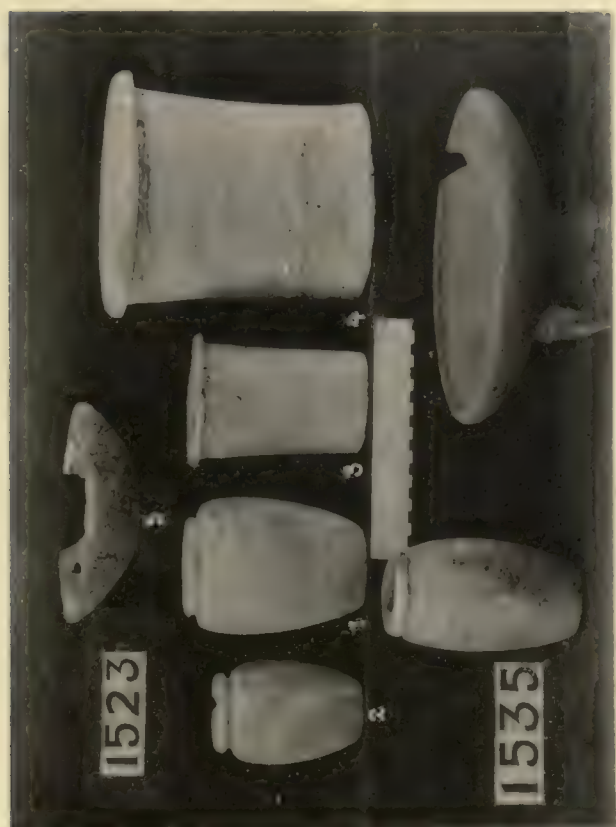
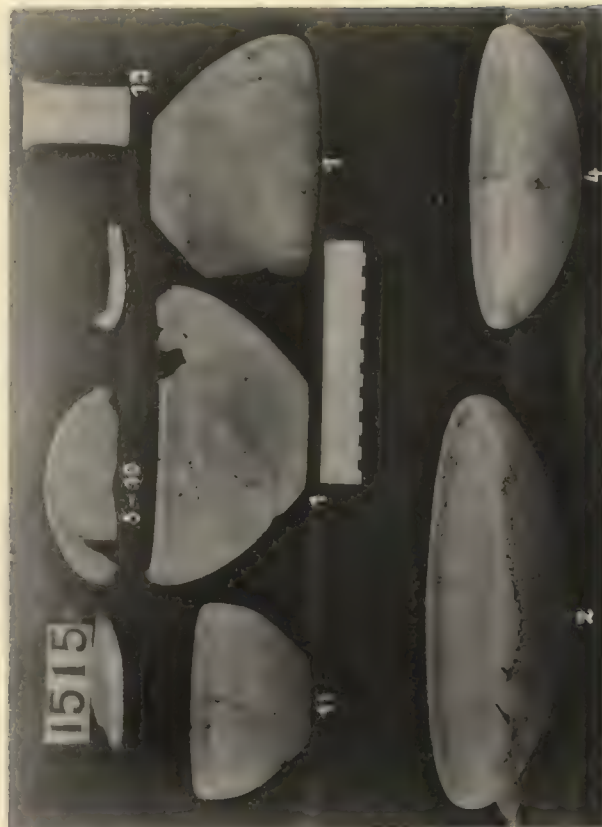
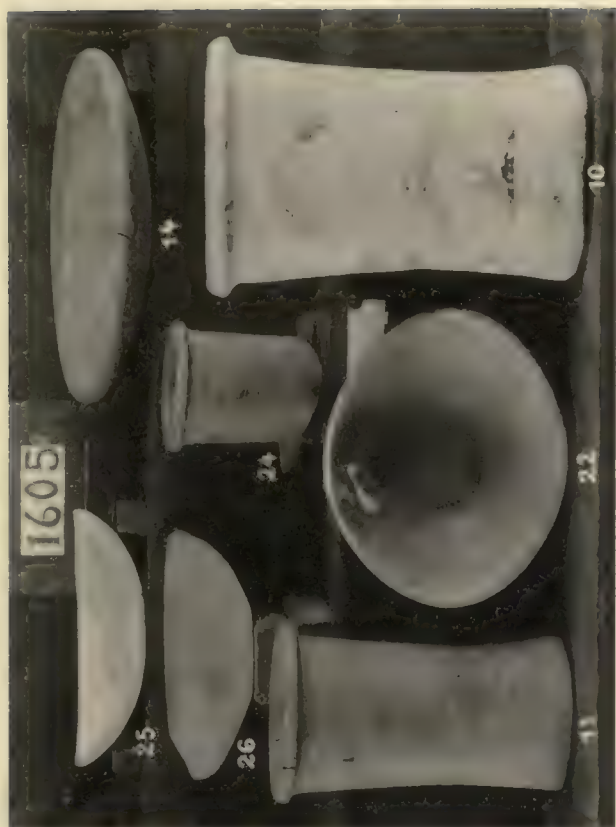


b. N. 1526. Alabaster.





## Early Dynastic Cemeteries I.

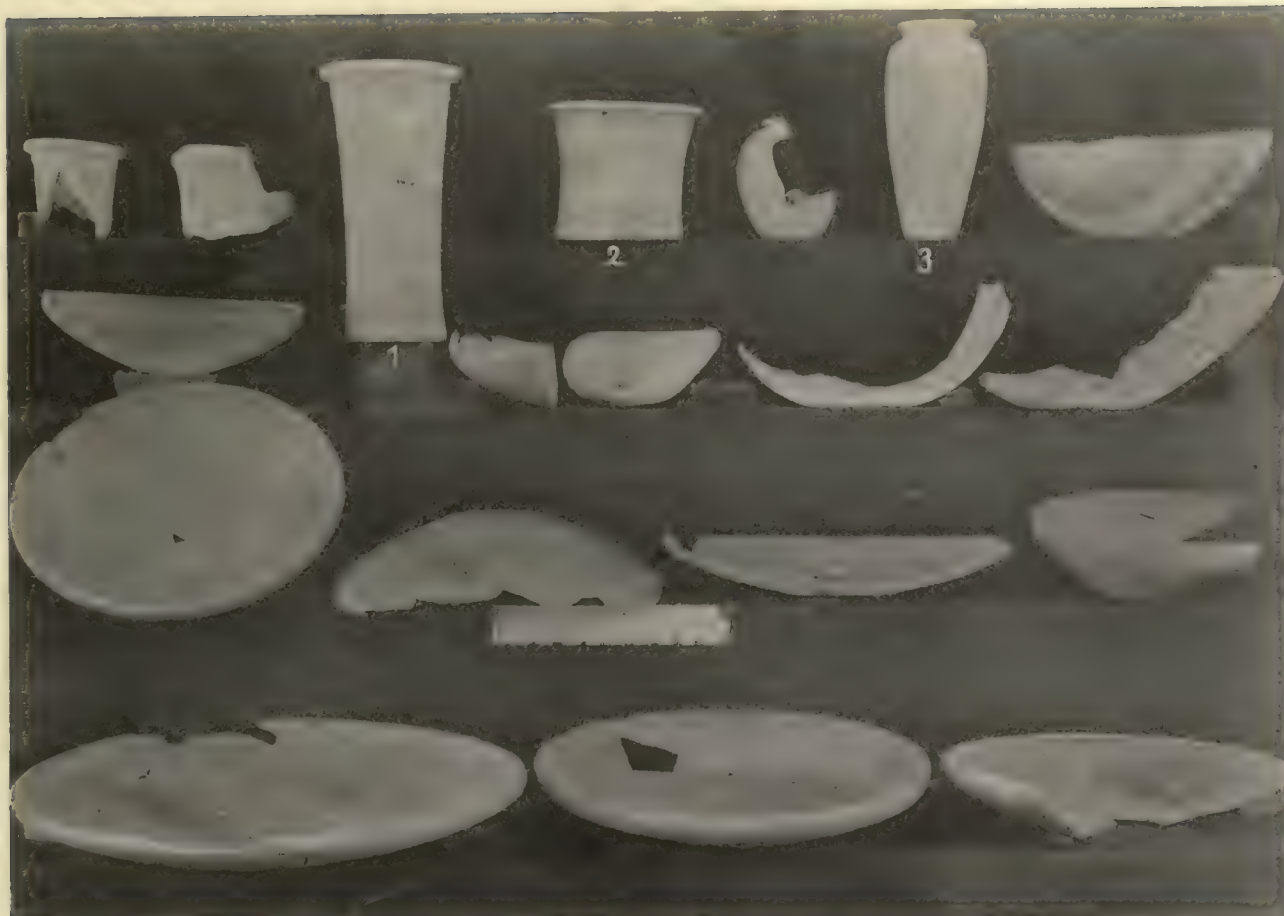


Stone vessels, tomb groups.

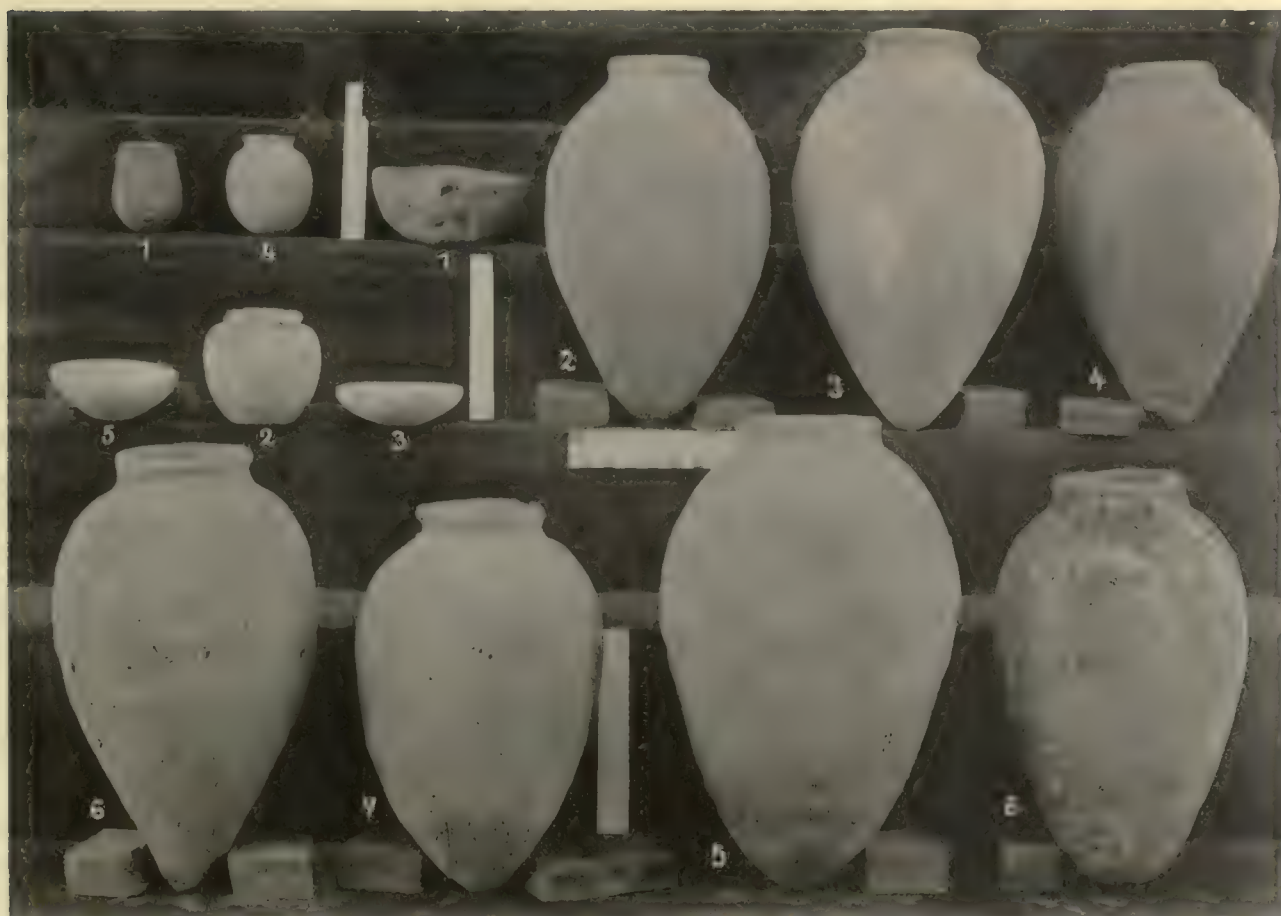




## Early Dynastic Cemeteries I.



a. N. 1572. Alabaster, volcanic ash and slate.



b. N. 1615. Stone vessels and Pottery.

c. N. 1614 (2, 3, 6) and N. 1616 (1, 4, 5) Pottery.







a. N. 1581. Pottery from floor stratum.



b. N. 1512. Pottery.







a. N. 1532. Red polished Pottery.









a. N. 1525. Pottery.



b. N. 1532, 1529, 1606 and 1533. Pottery.







a. Pottery.

1:6.



b. Pottery.





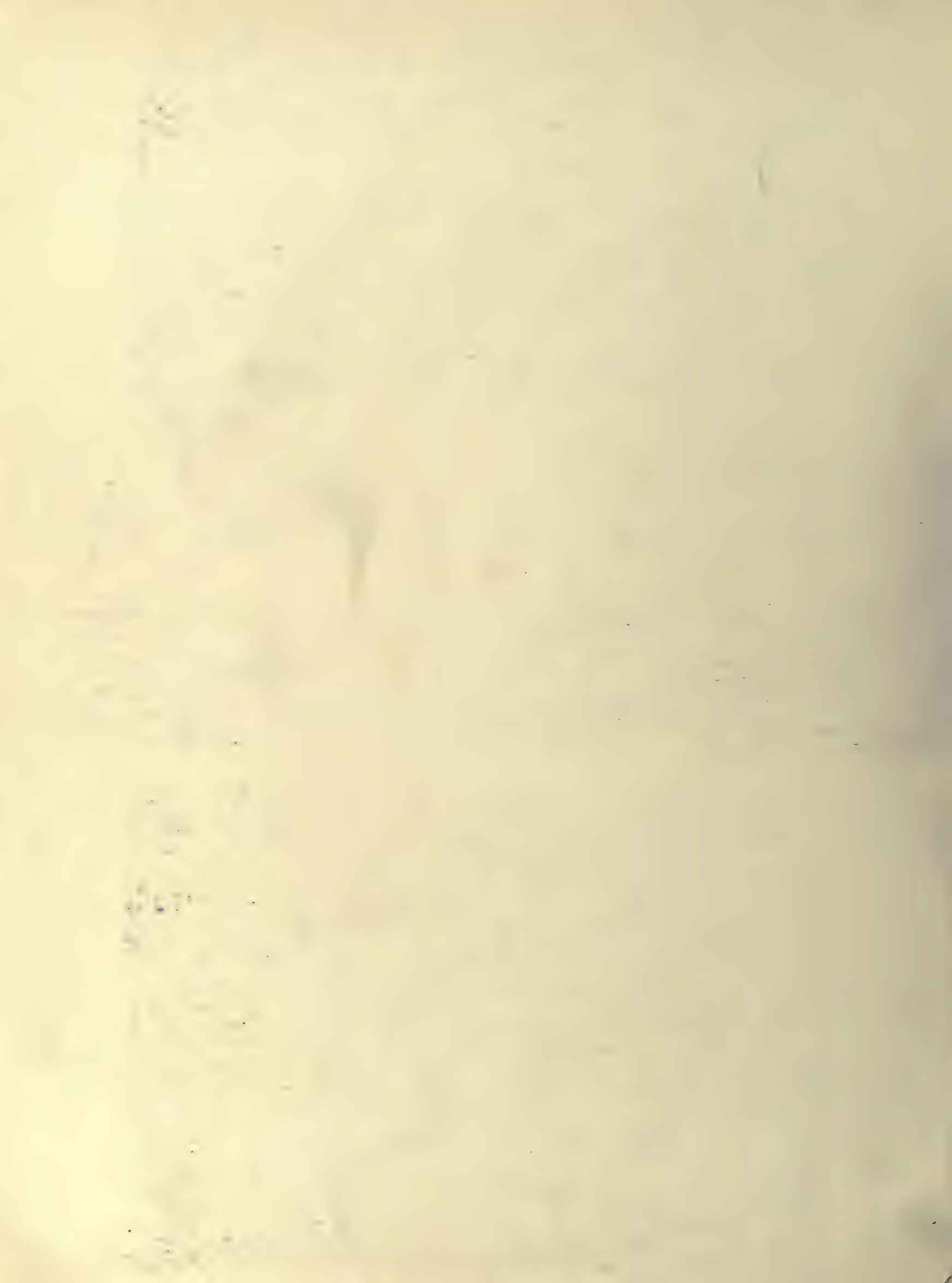


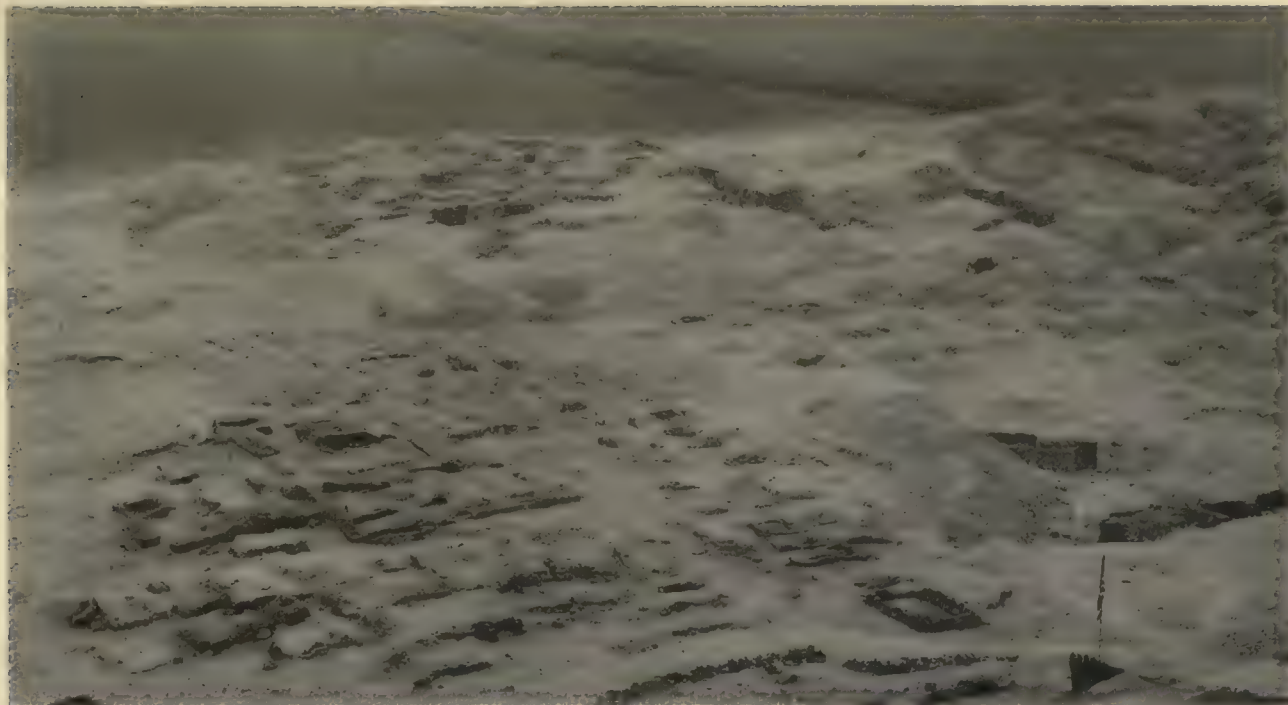
a. N. 1501 and 1514. Pottery.

1:6





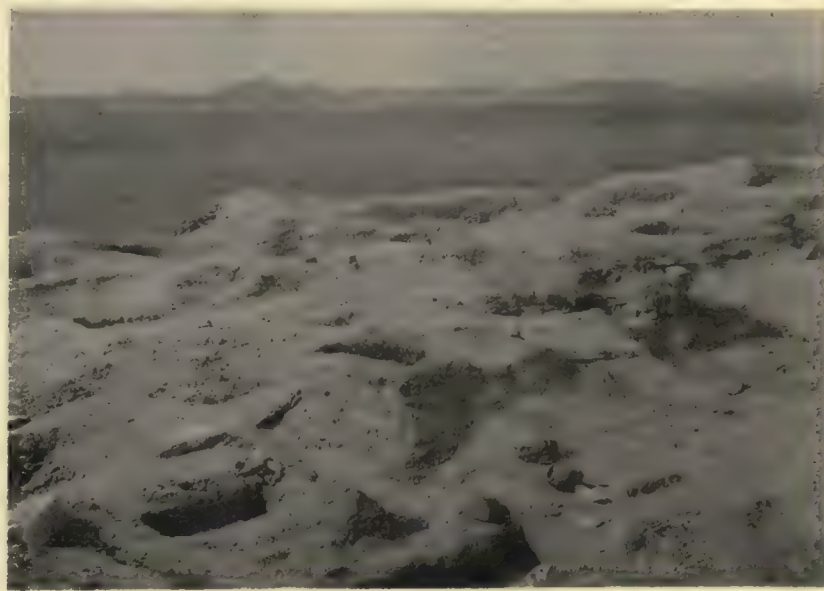




a. Cam. 3000, from above looking west.



b. Lime-kiln debris west of N. 3001.



c. Surface after removal of lime-kiln debris.







## Early Dynastic Cemeteries I.



N. 3017. Pottery and stone vessels in position, from above, from the east.



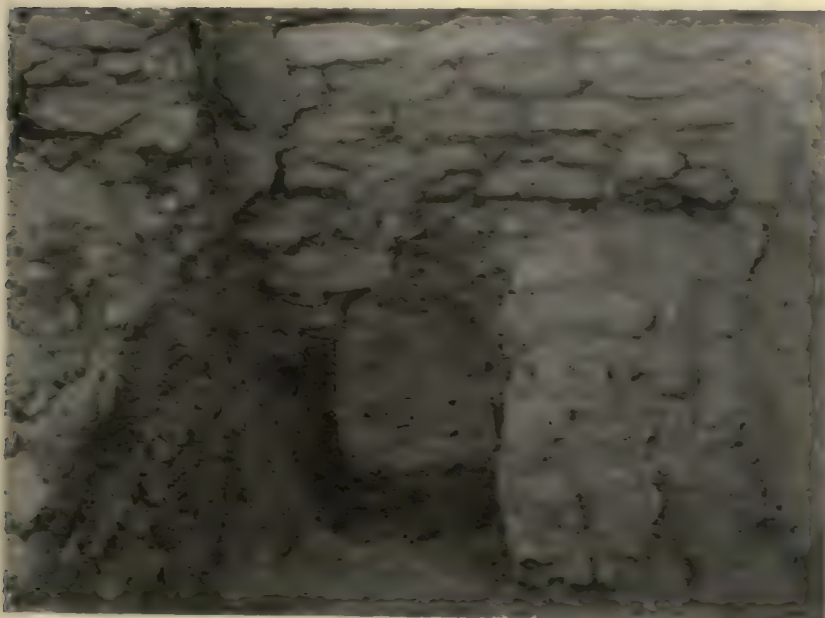




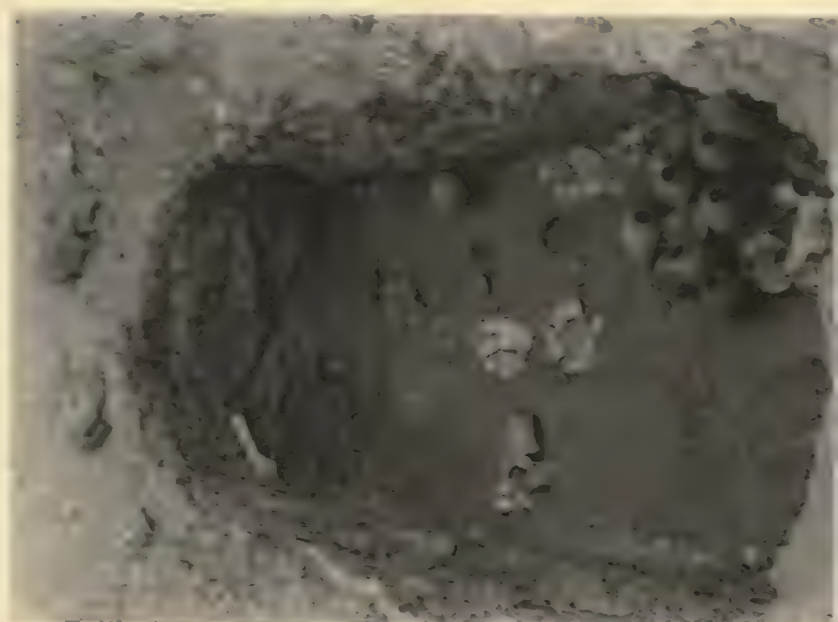
a. N. 3017. Stairway with door-block.



b. N. 3017. Modern kiln in stairway.



c. N. 3017. Hole in door-block.



d. N. 3017. Interior from the north.



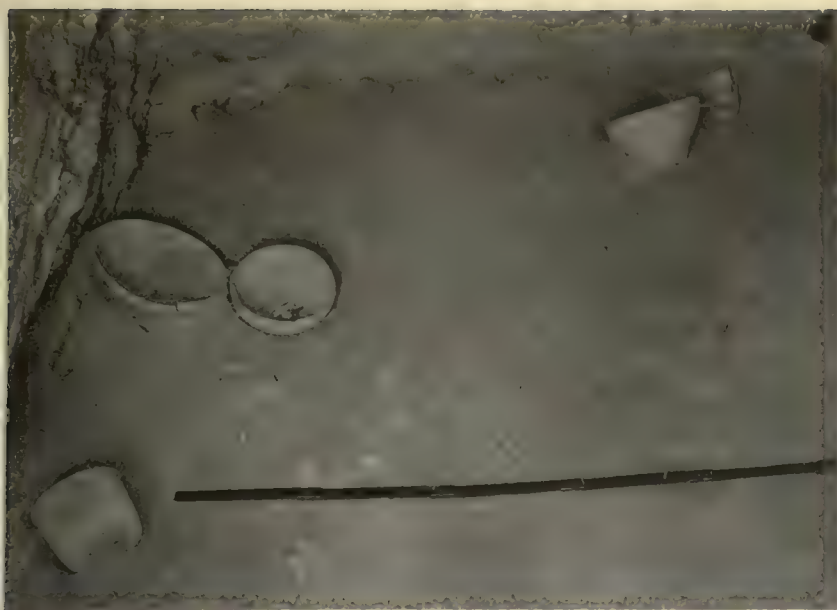
e. N. 3017. Limestone debris, filling above vault in NW corner.



f. N. 3017. Vault from the north.







a. N. 3013. Interior, south end.



b. N. 3013. Interior, north end.



c. N. 3012. Vault, from the south.



d. N. 3012. Doorway.



e. N. 3012. Interior.





## Early Dynastic Cemeteries I.



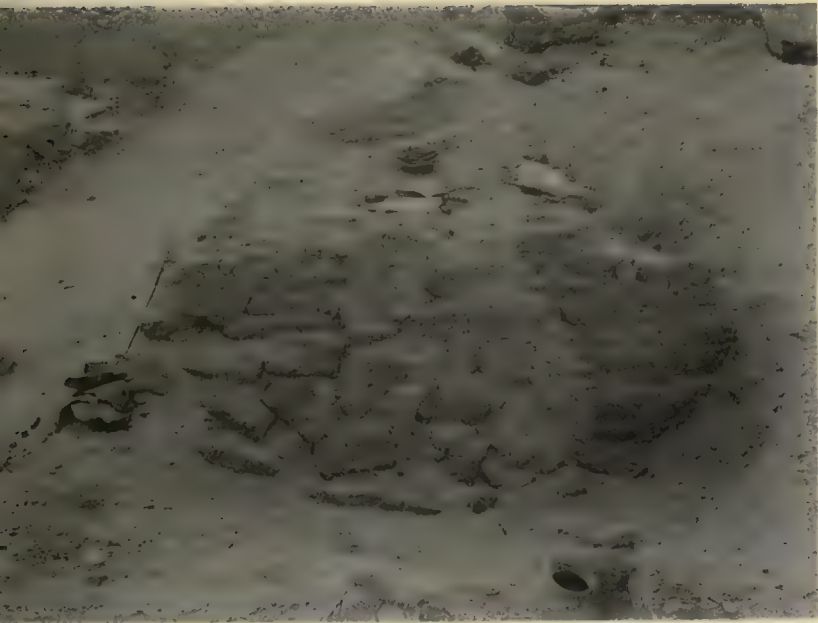
a. N. 3003 and 3022. From the south.



b. N. 3022 and 3012. From the east.



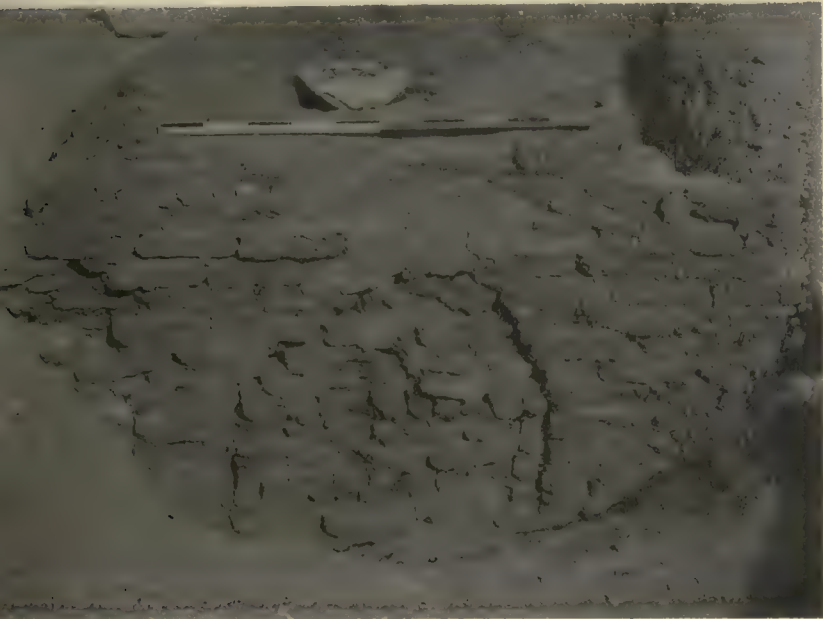




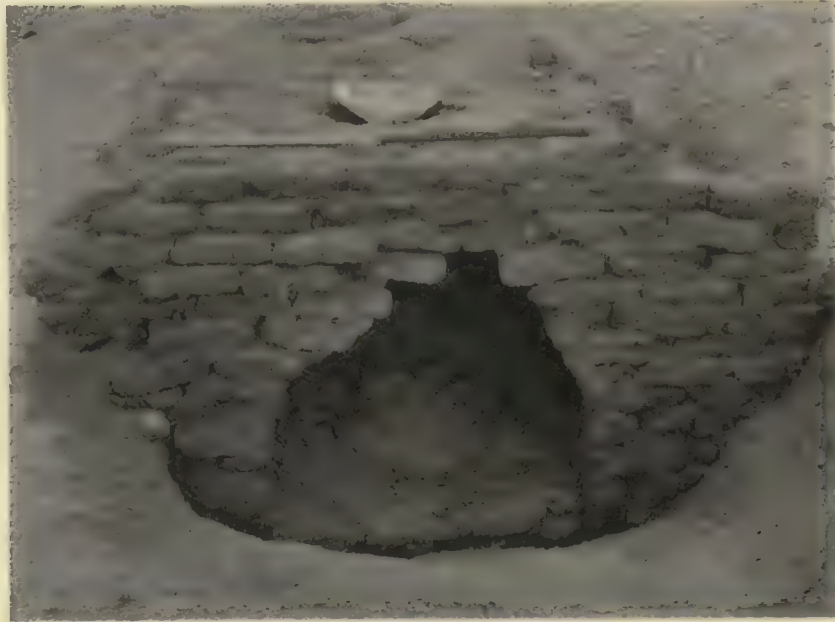
a. Bricks before door.



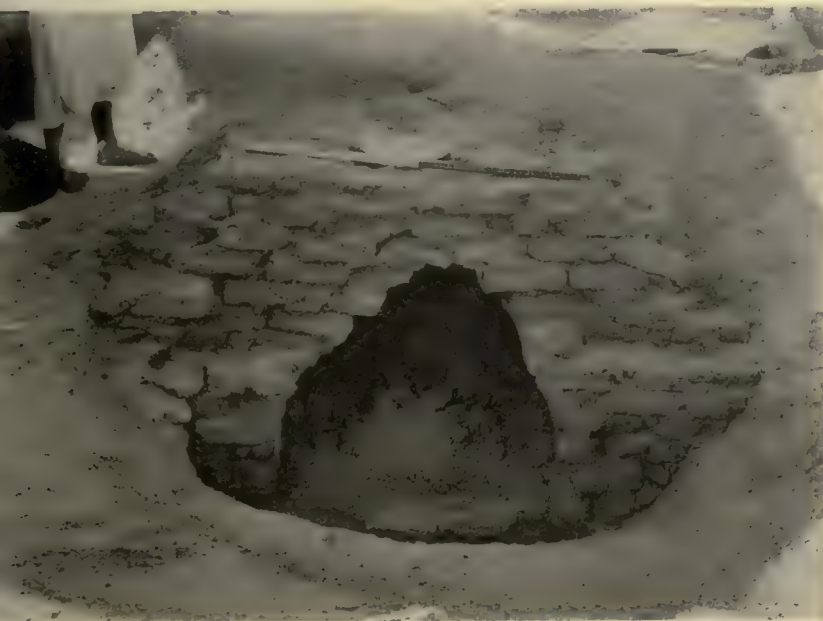
b. Plastered blocking in door.



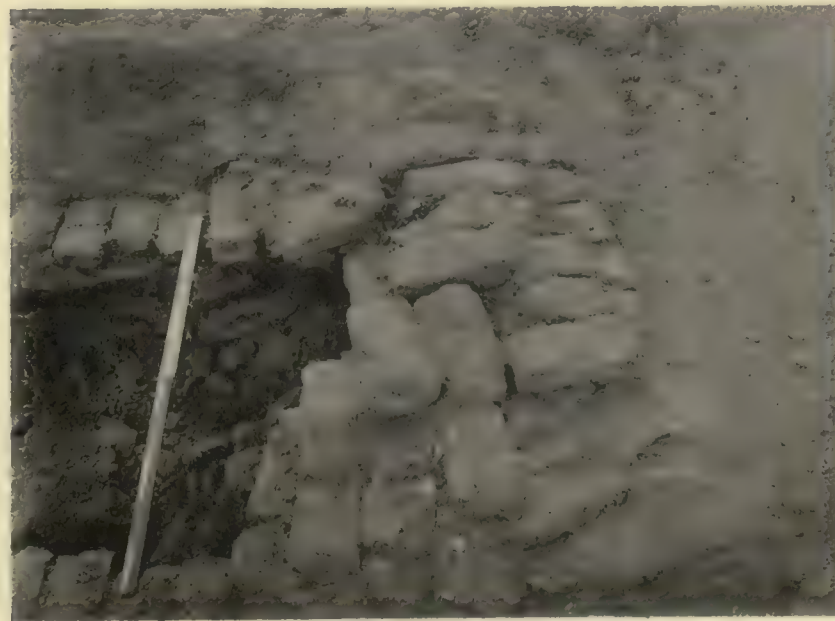
c. Door-blocking.



d. Door.

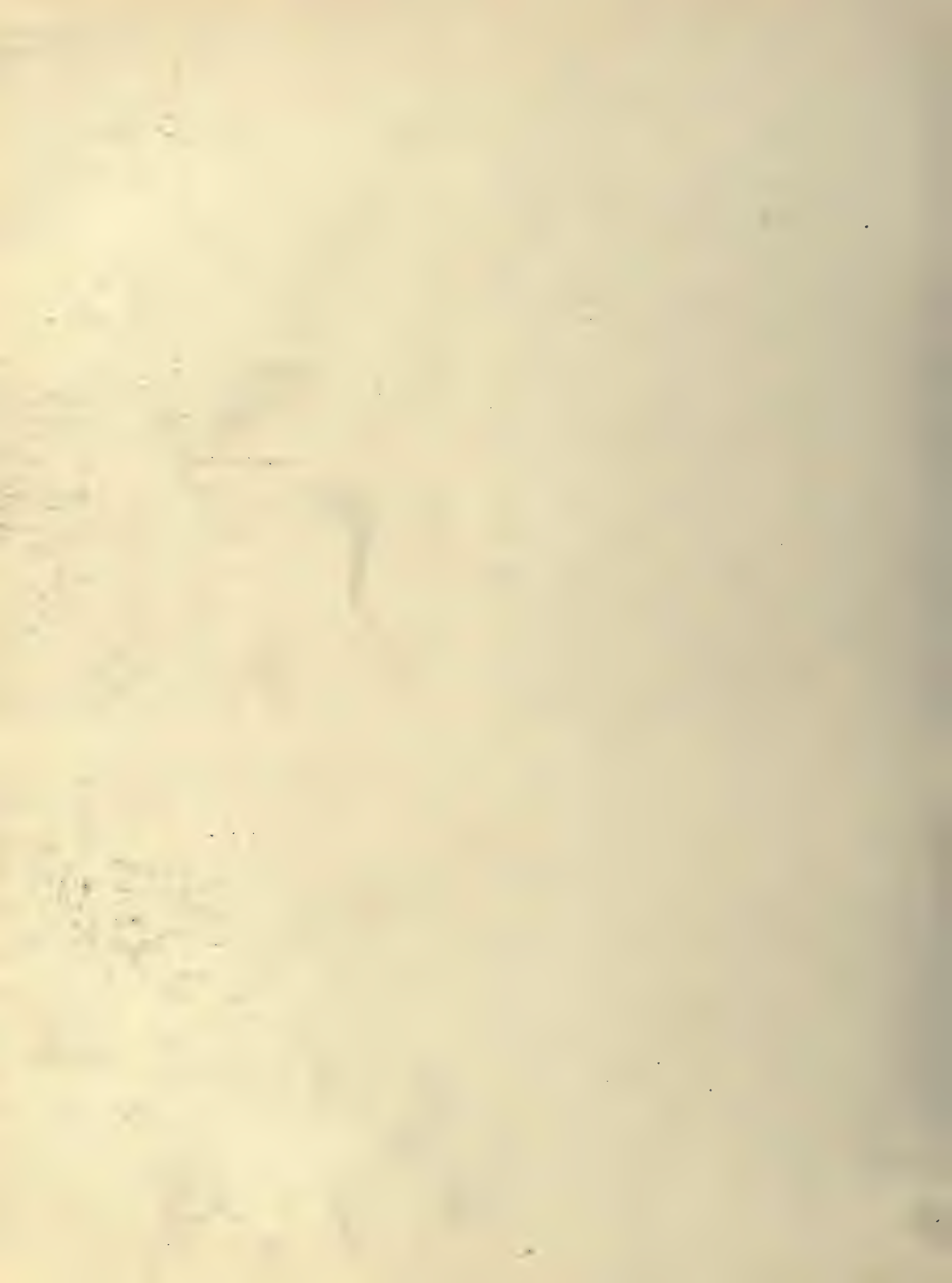


e. Section of vault.



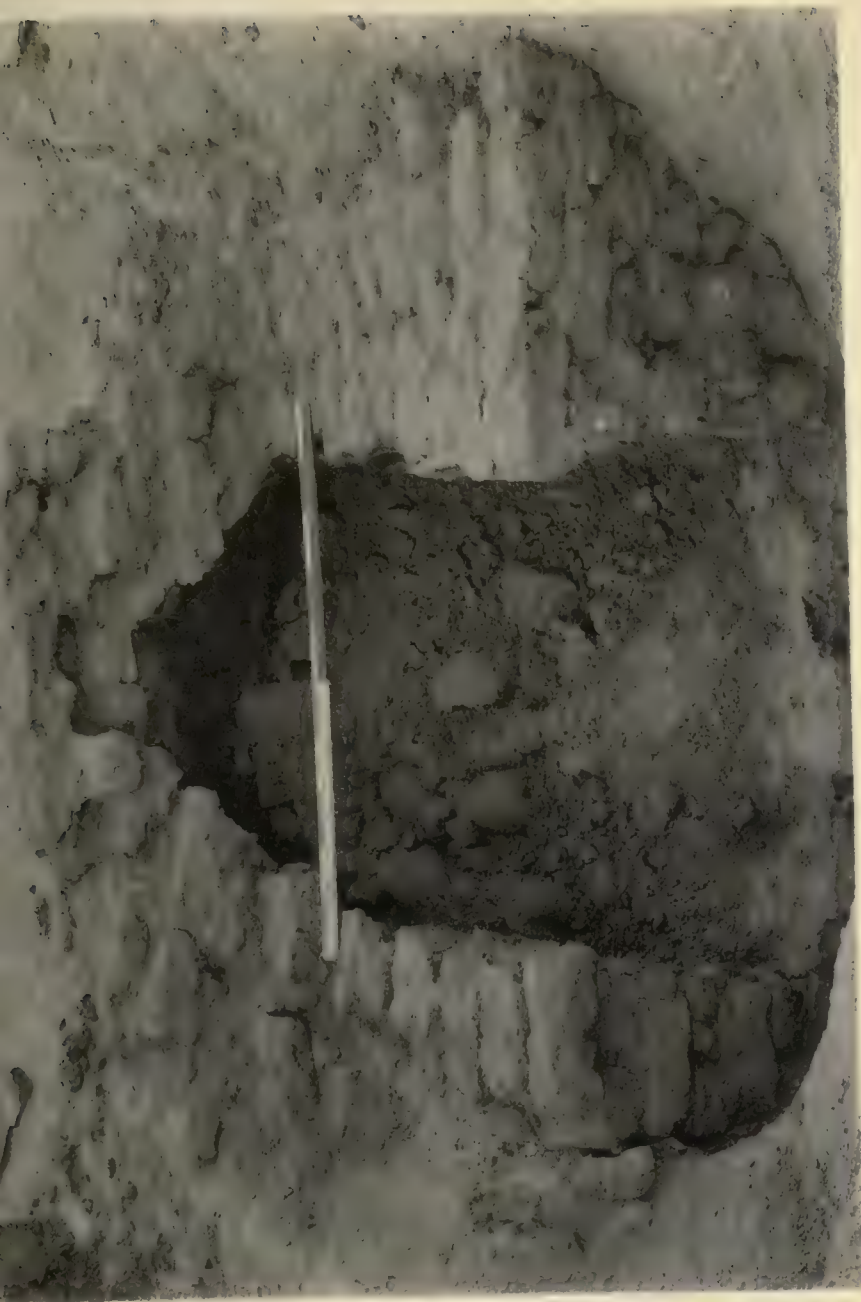
f. Construction of vault at northeast corner.



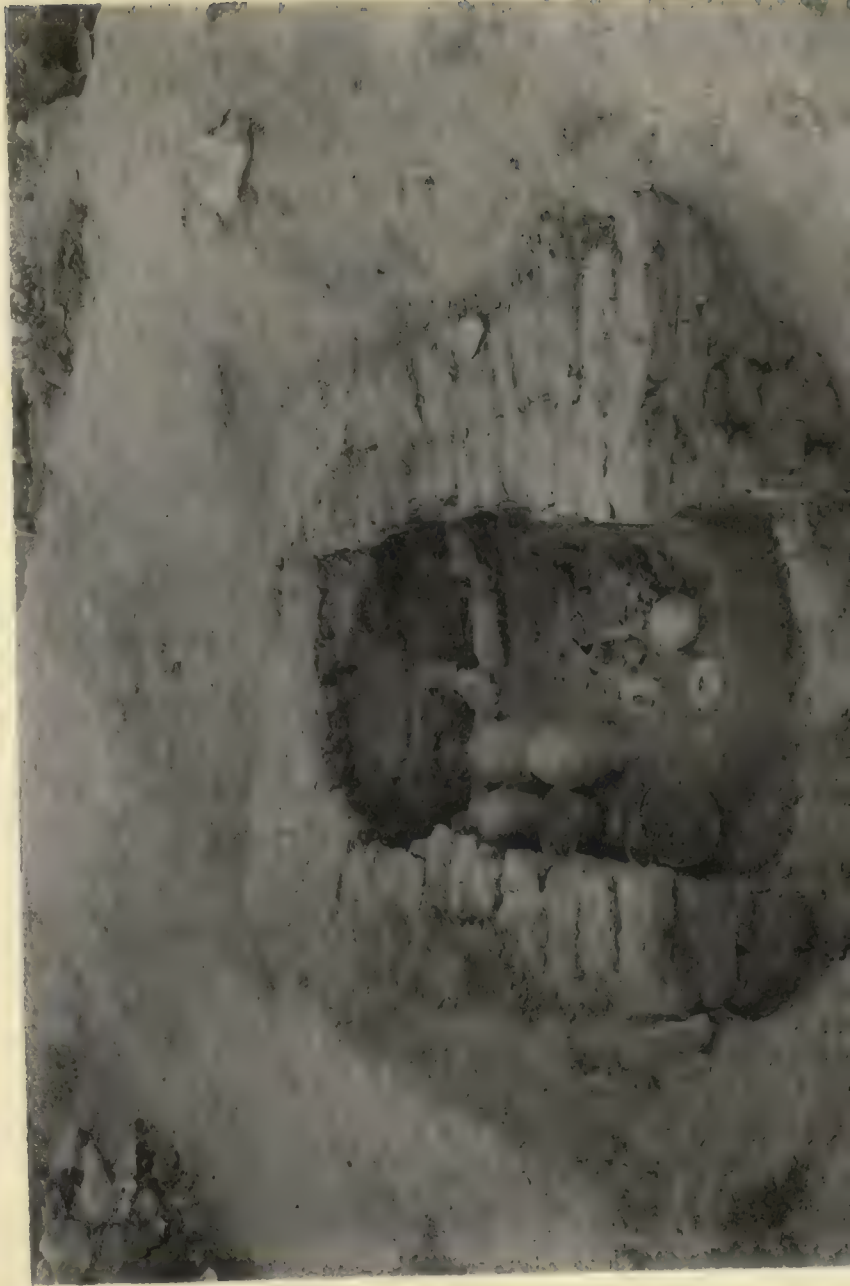




d. N. 3023. After removing pots.

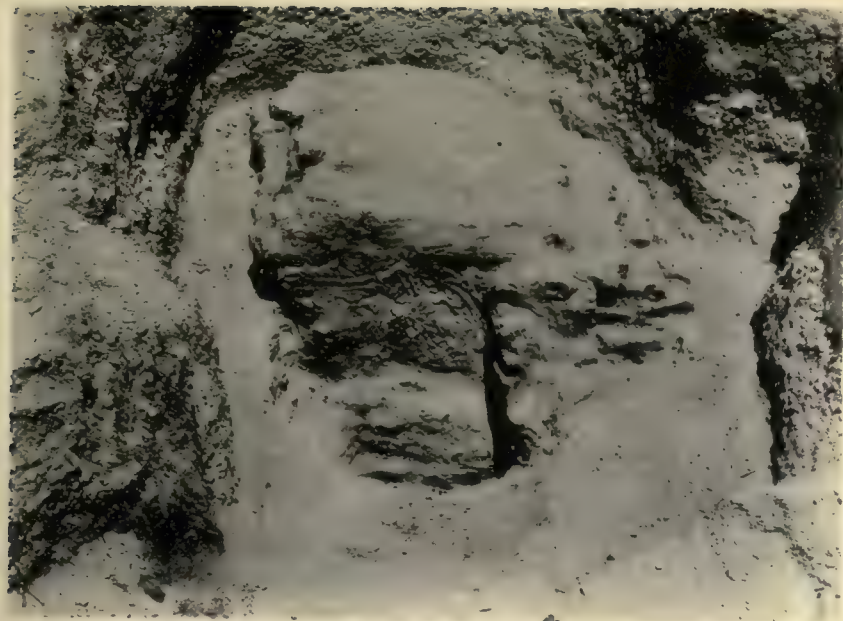


a. N. 3023. Interior, debris from roof.









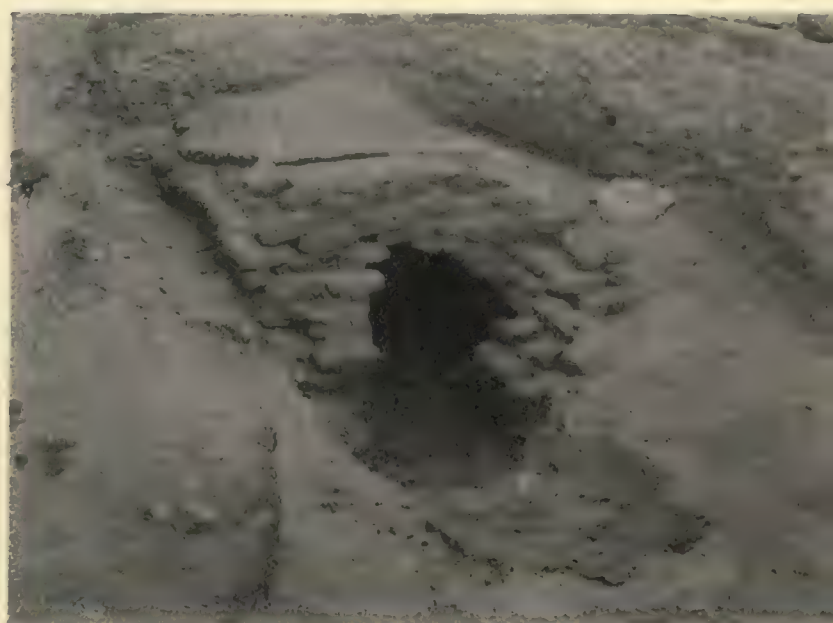
a. Vault, from south.



b. Vault, after south east corner fell off.



c. Door blocking.



d. Doorway and section of vault.



e. Interior of vault.







a. N. 3014. Section of vault.



b. N. 3014. Skeleton.





## Early Dynastic Cemeteries I.



No. 3031, 3061 and 3074 from above, from the east side.







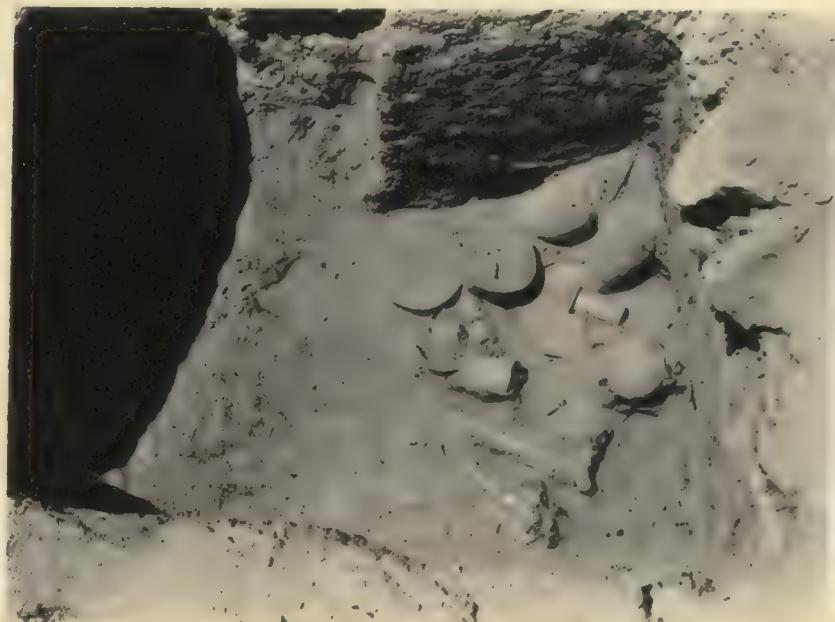
b. N. 3053. Exterior, from north.



a. N. 3053. Interior from doorway.



d. N. 3071. Log over doorway.



c. N. 3071. Burial from above, from east side.



f. N. 3015. Traces of entrance on west side.



e. N. 3015. Burial from above, from west side.



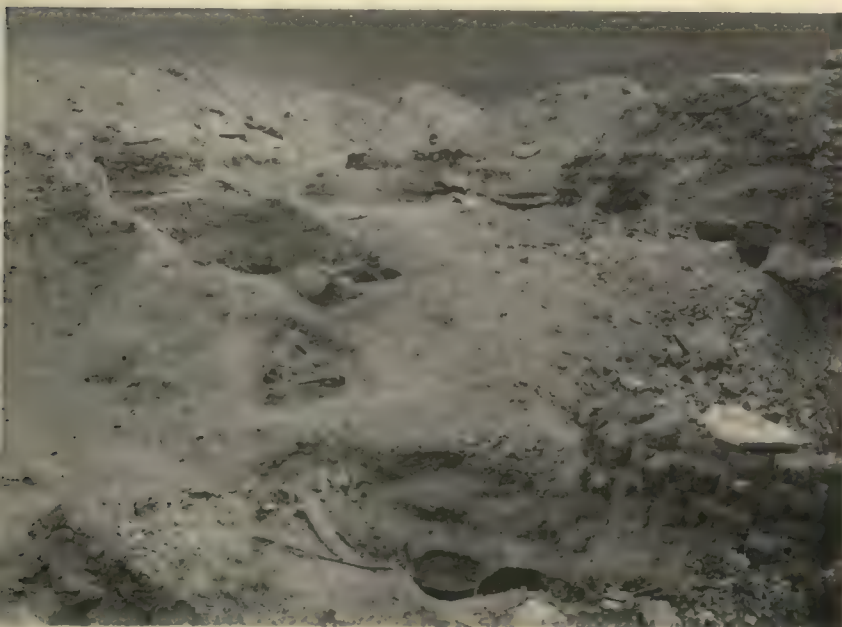




a. N. 3018. From above from south side.



b. N. 3061. From above from east side.



c. N. 3091 and 3092. From the north.



d. N. 3091 and 3092. Nearer view.



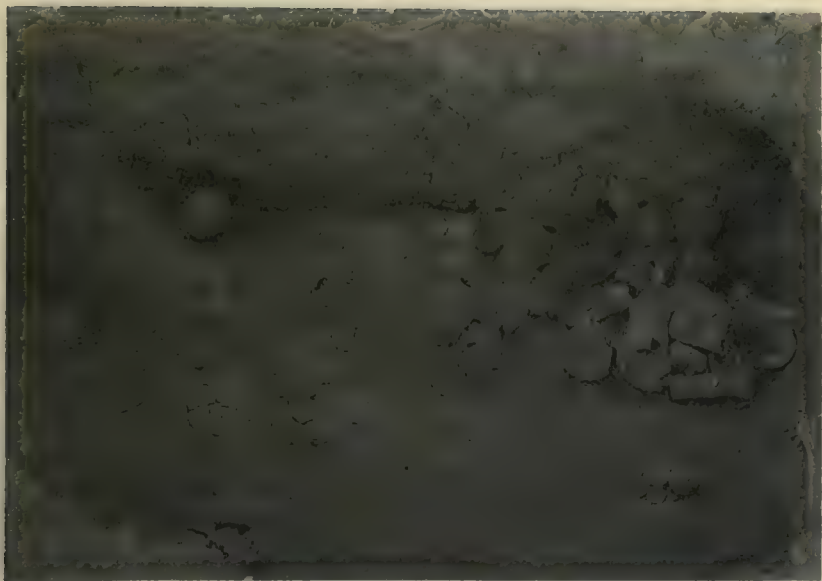
e. N. 3092. Skeleton, from above, from west side.



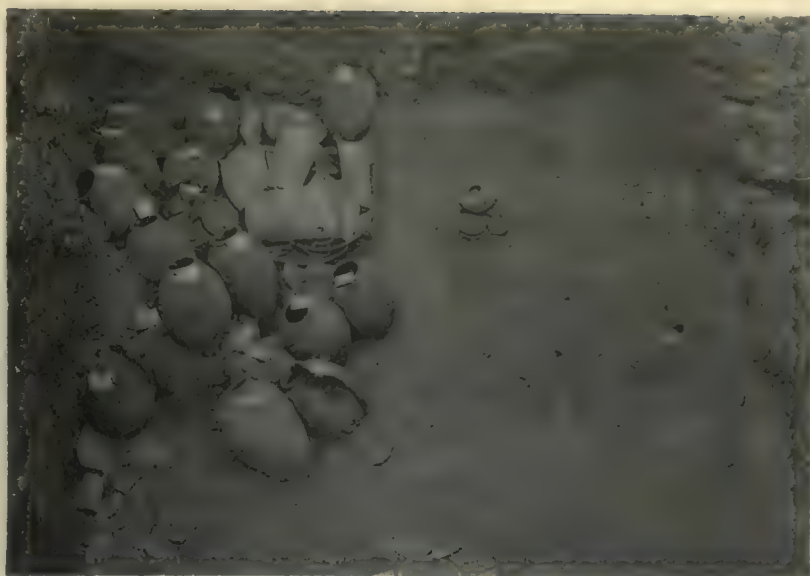
f. N. 3091. Burial, from above, from north side.







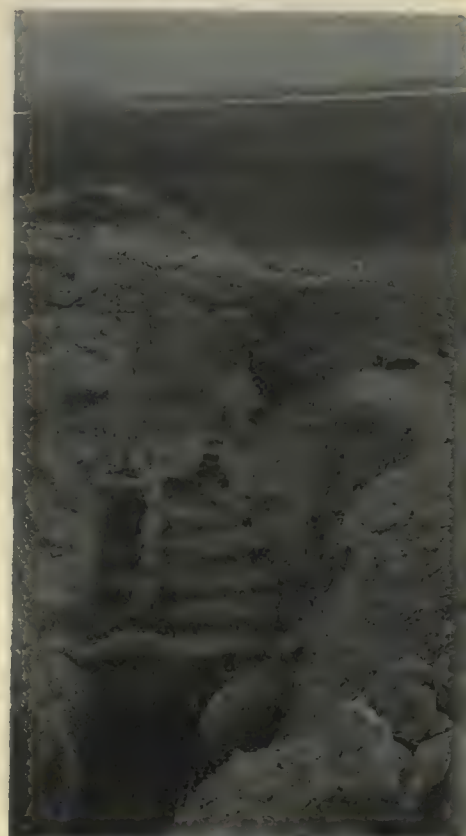
a. N. 3017, vessels 22-56, from the east.



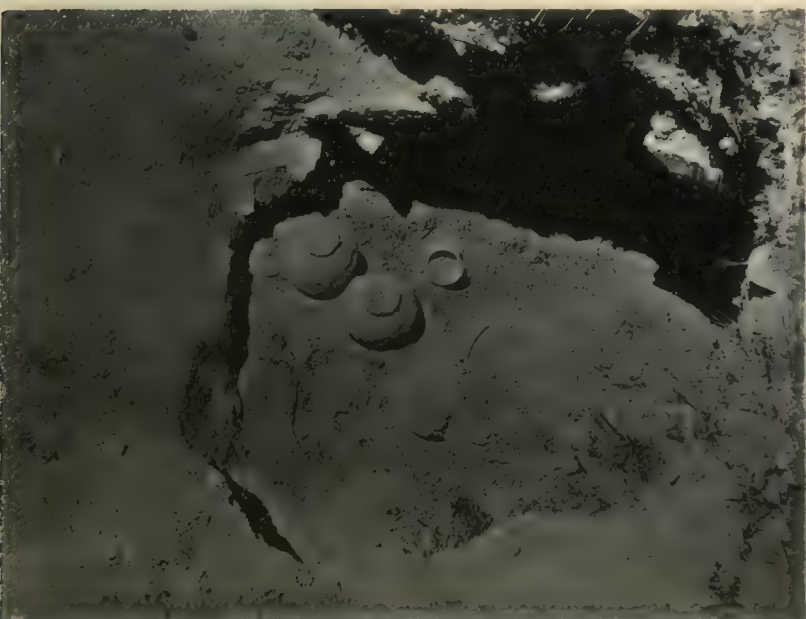
b. N. 3017, vessels 1-21, from the south.



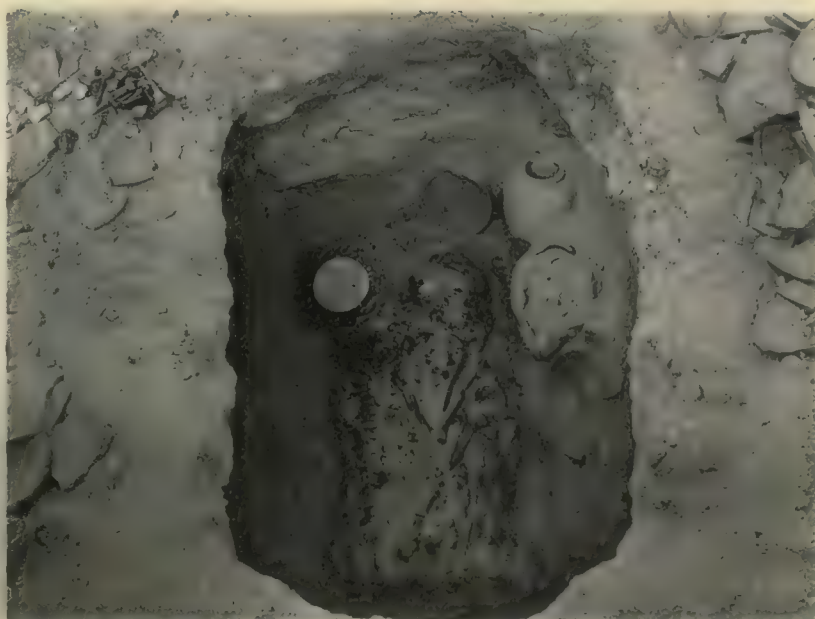
c. N. 3013, position of contents, from the north.



d. N. 3041, from the east.



e. N. 3051, from above from the east.



f. N. 3023, from above from the north.



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## Early Dynastic Cemeteries I.



a. N. 3016. Stone vessels.



b. N. 3031. Stone vessels.





## Early Dynastic Cemeteries I.



a. N. 3017. Stone vessels.



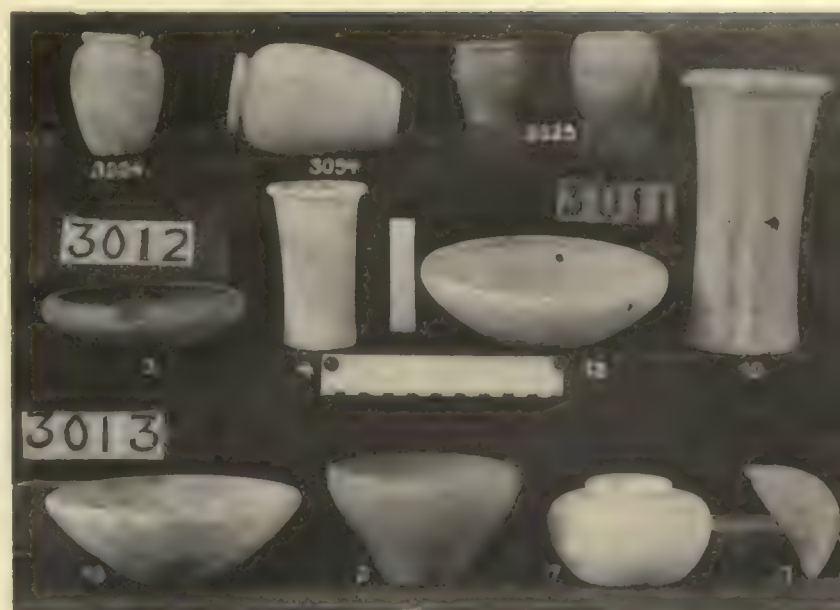
b. N. 3017. Stone vessels.



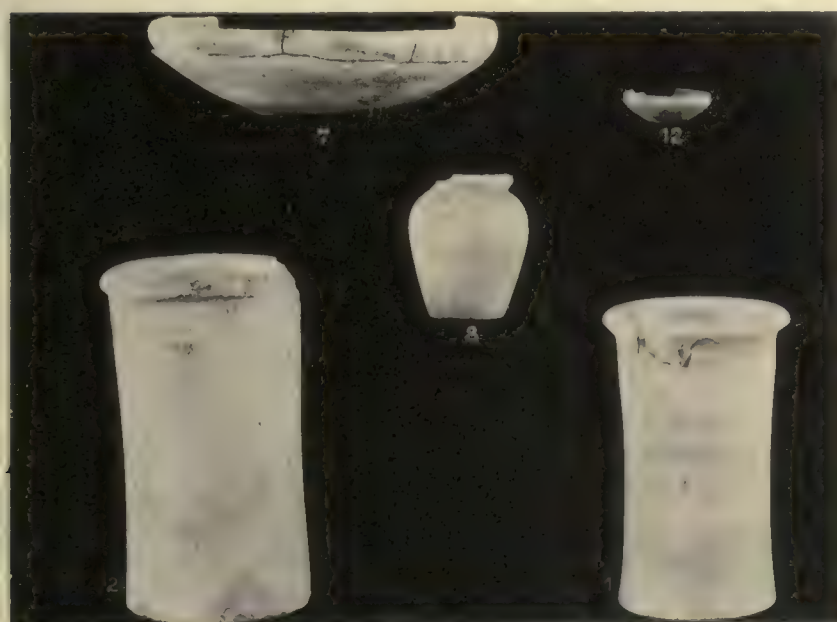




a. N. 3001. Alabaster and limestone.



b. N. 3024, 3054, 3025, 3011, 3012, 3013. Stone vessels.



c. N. 3015. Stone vessels



d. N. 3051, 3052. Stone vessels.



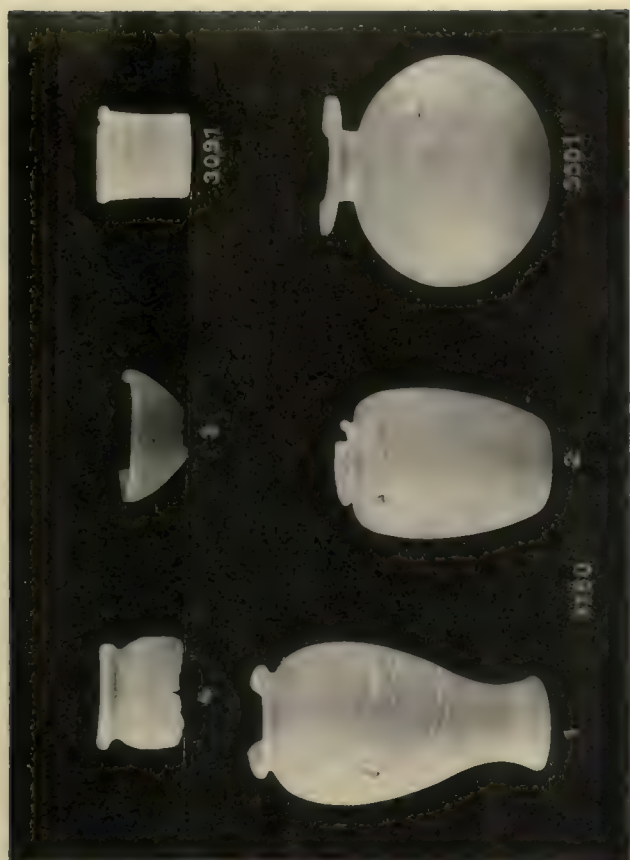
e. N. 3053. Stone vessels.



f. N. 3022, 3222, 3071, 3061, 3003, 3002, 3261. Stone vessels

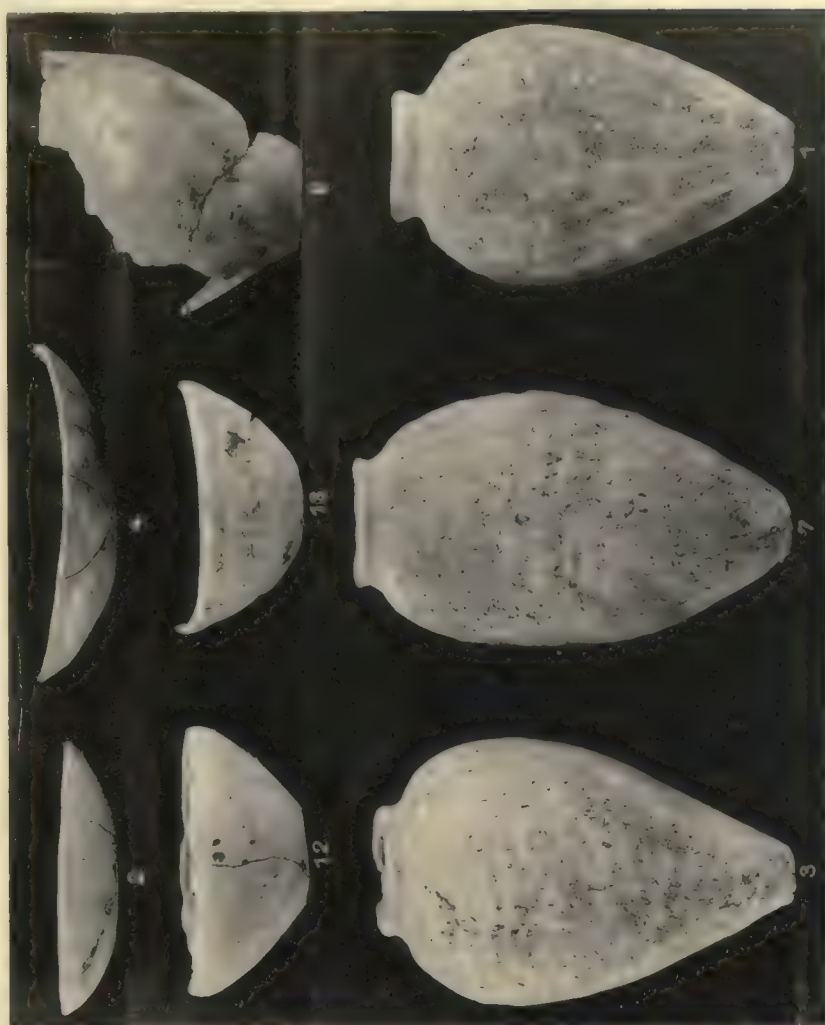






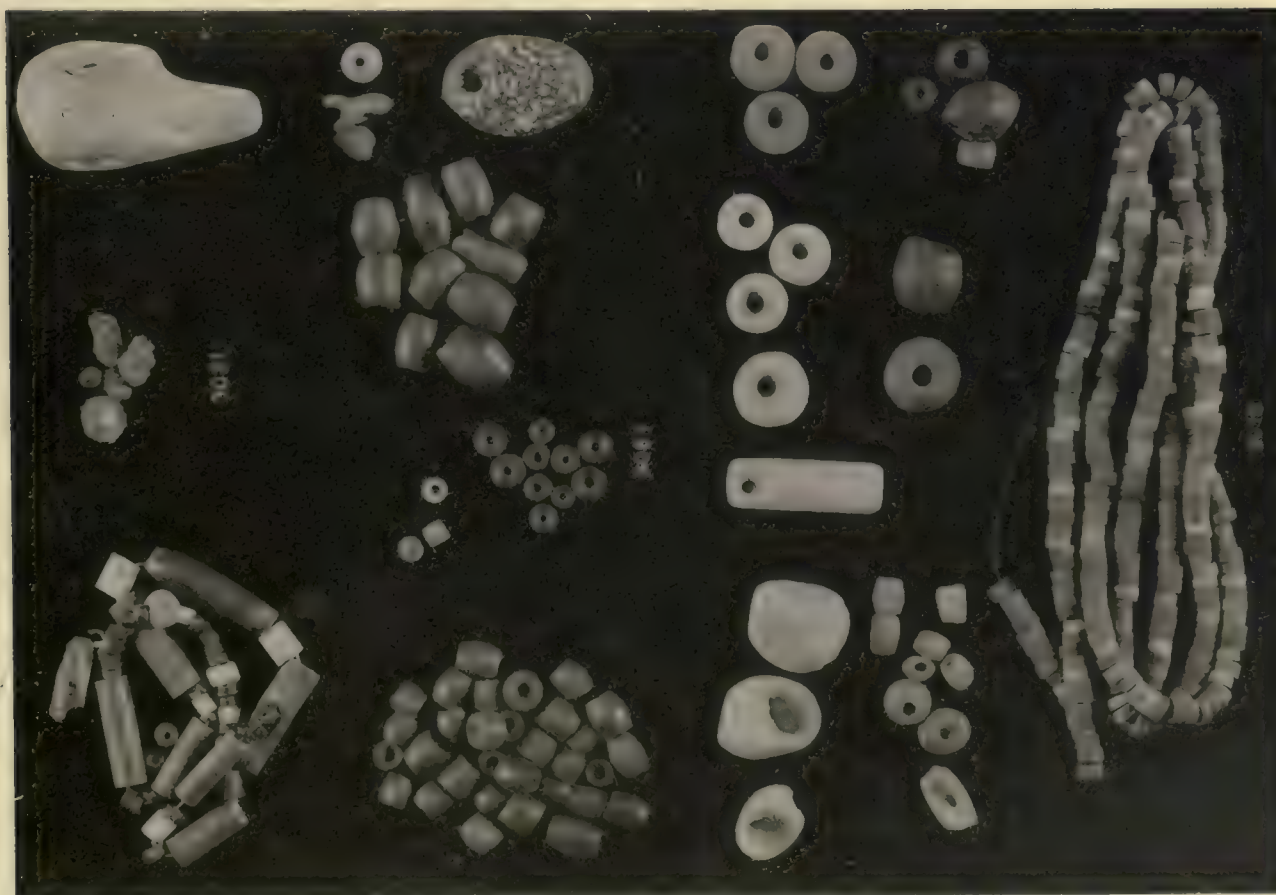
a. Alabaster and black stone.

1:6.



b. N. 3016. Pottery.

1:6.

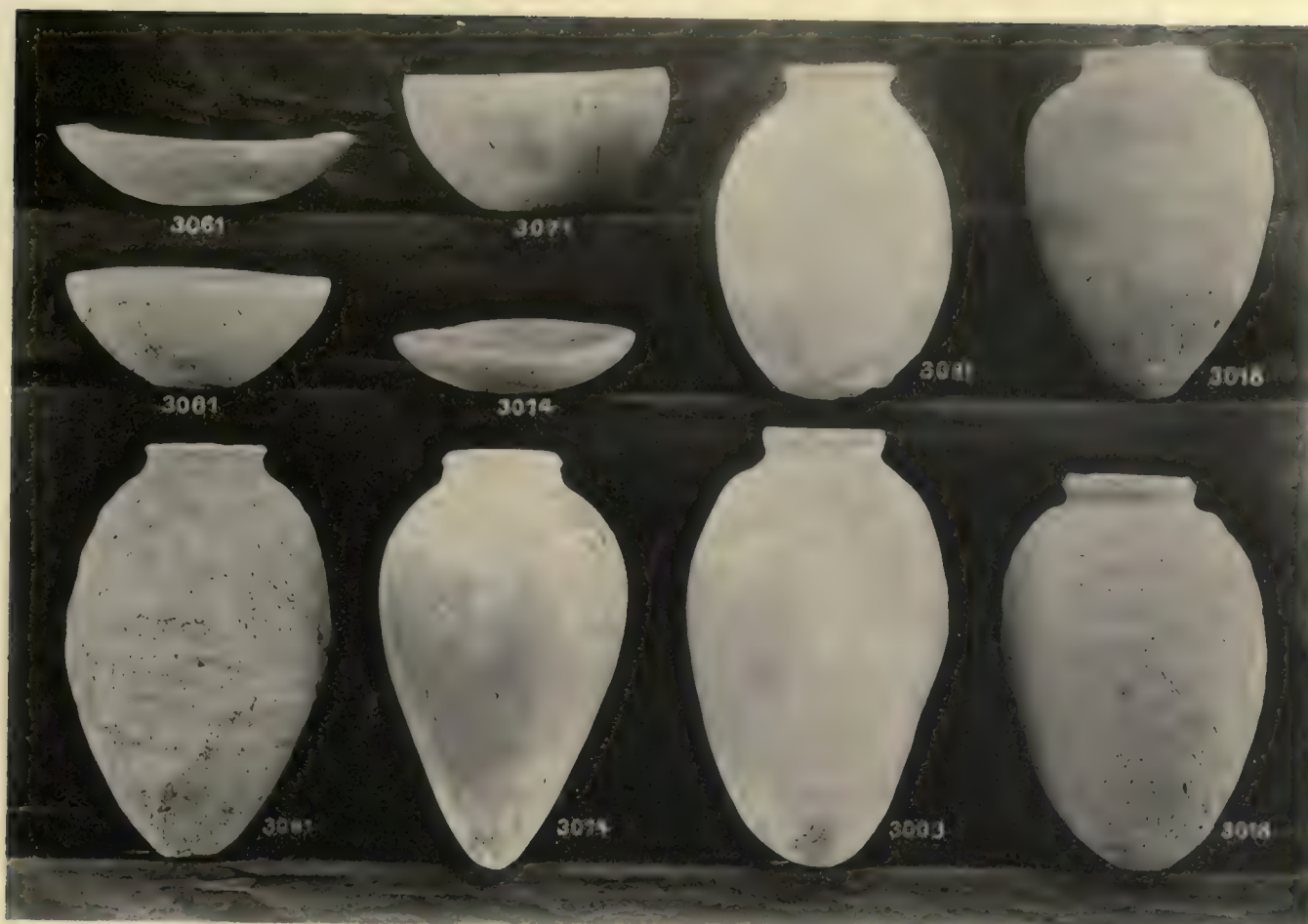


c. Beads.

10  
11  
12  
13







a. Pottery.

1:6.

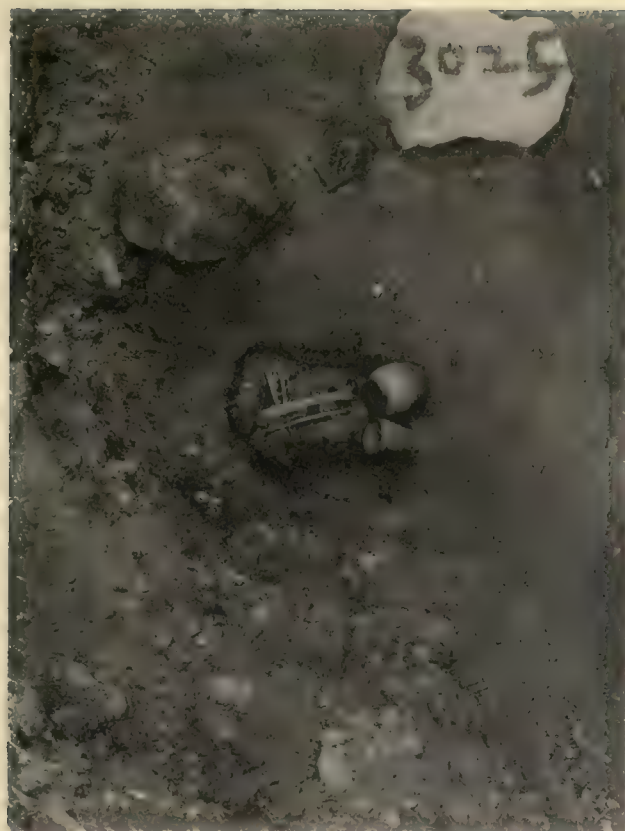


b. N. 3017. Pottery.

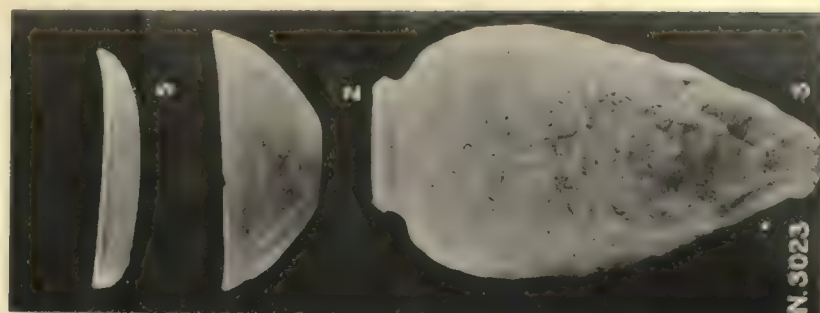
1:6.



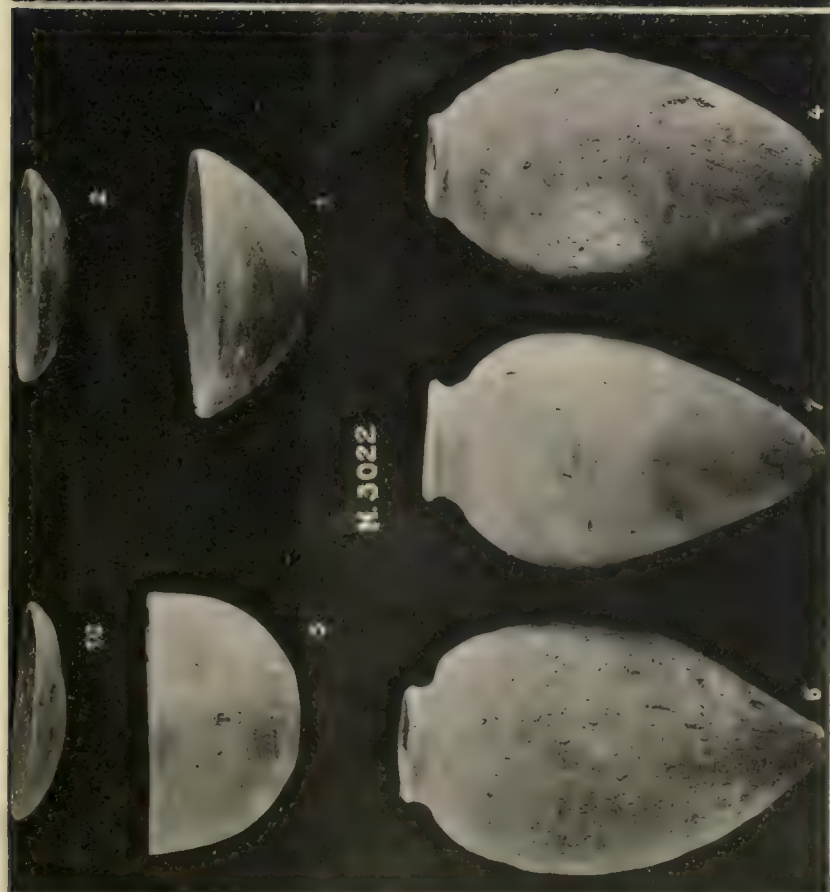
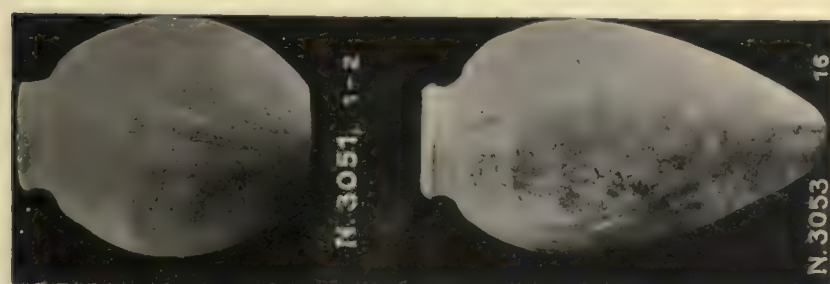




a. N. 3025, from the west.



b. N. 3023, 3052, Pottery.



c. N. 3022, 3051, 3053, Pottery.

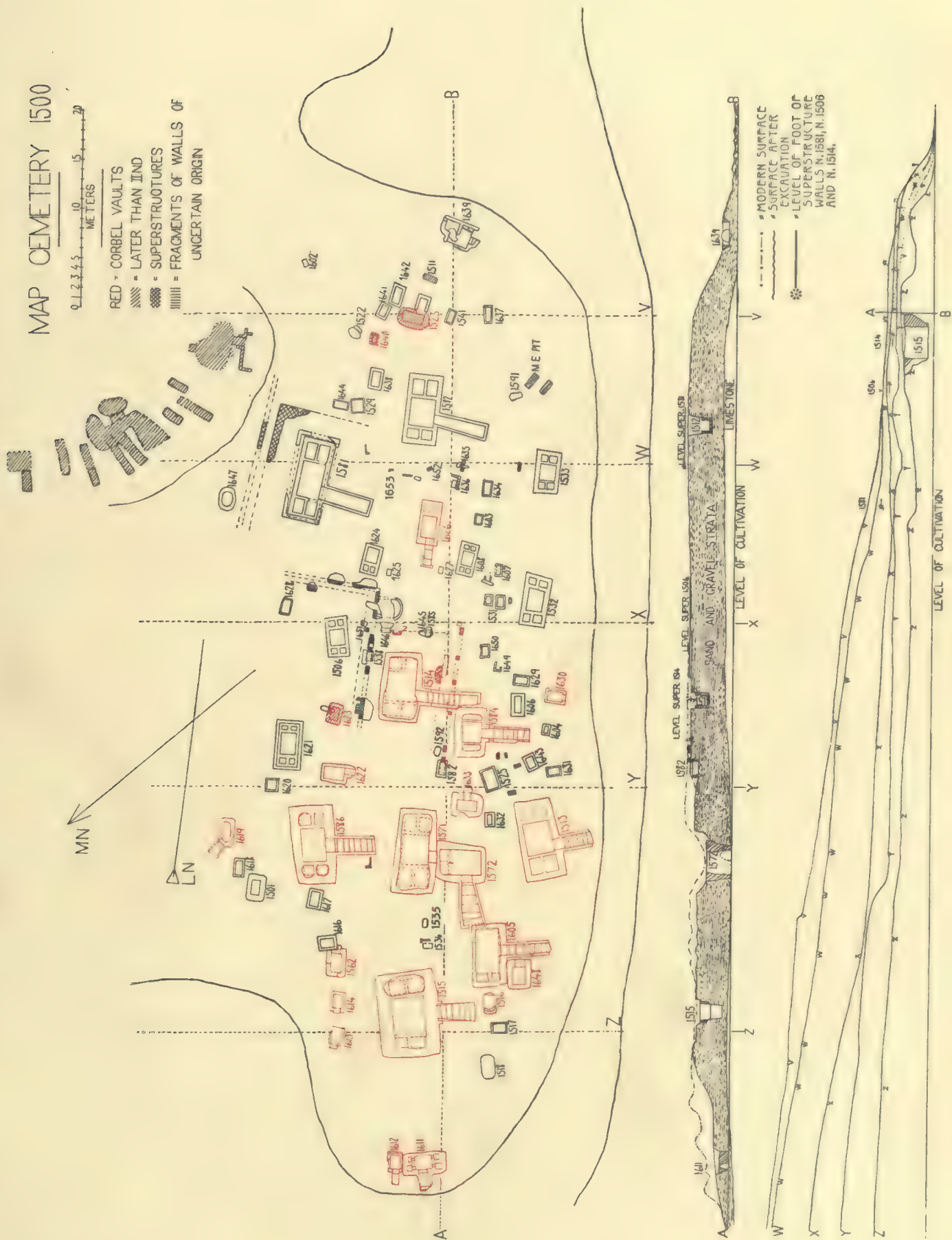


d. N. 3150, stone vessels, as found.





## Early Dynastic Cemeteries I.

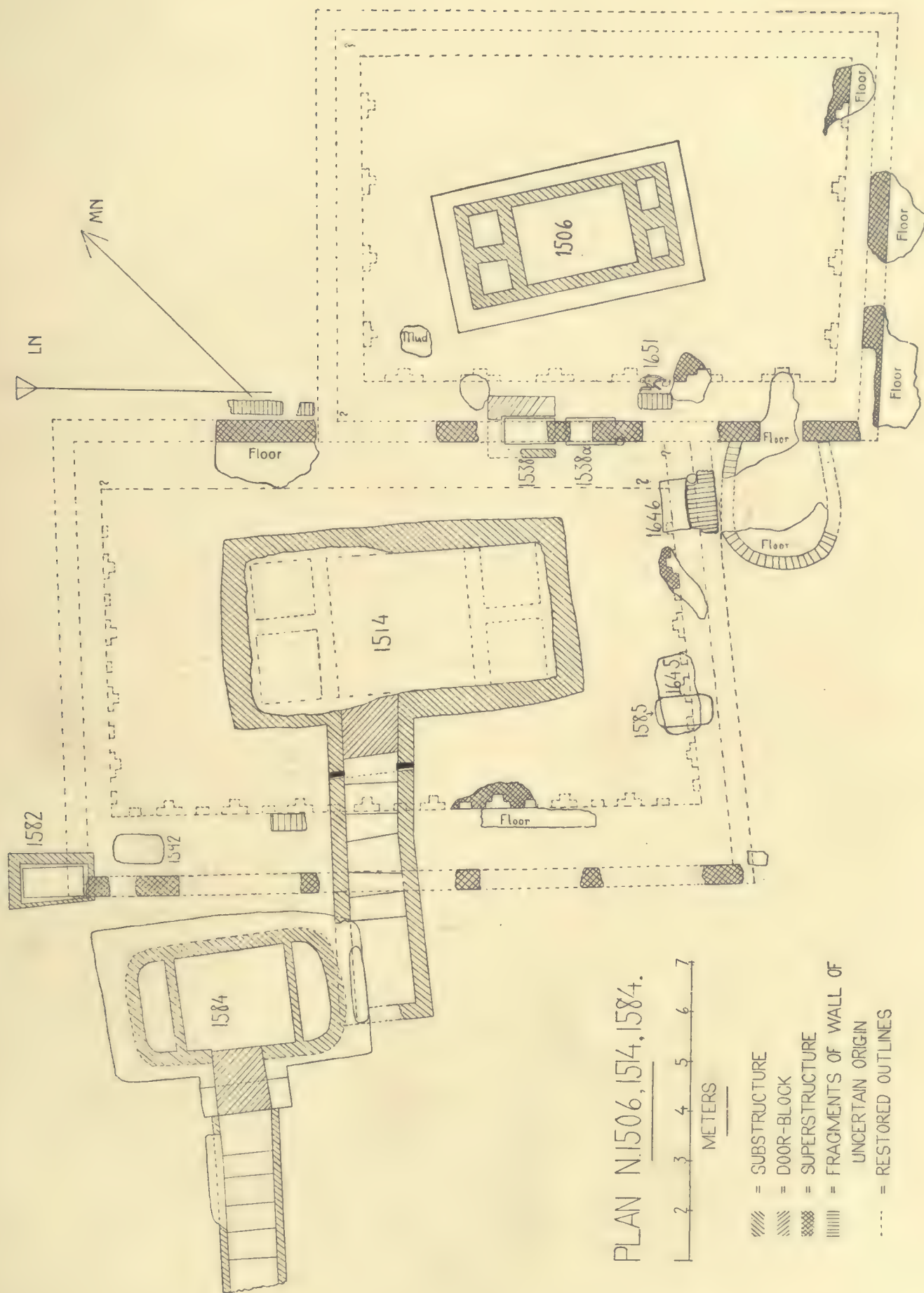


Map I.





Early Dynastic Cemeteries I.

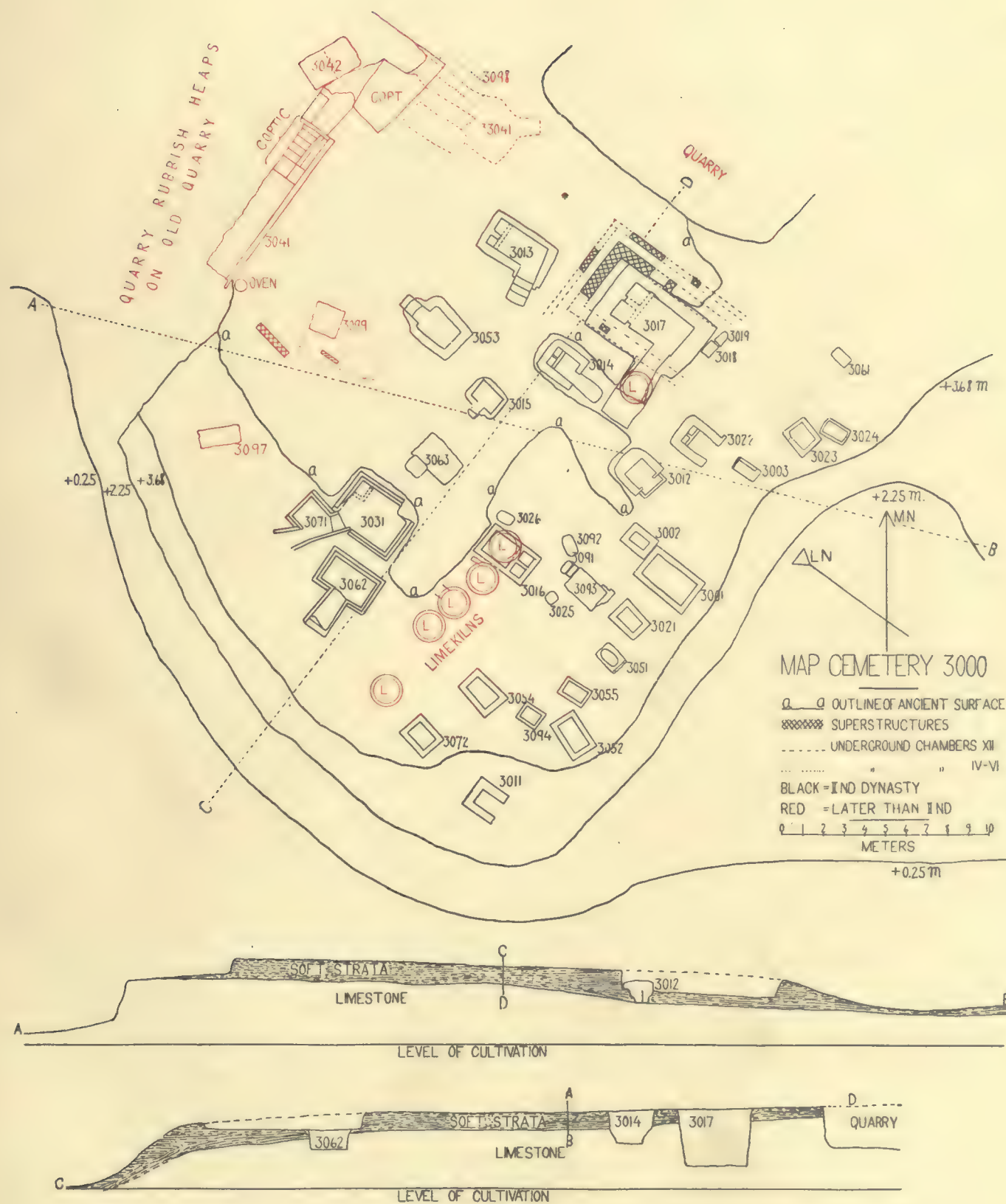


Map II.





## Early Dynastic Cemeteries I.



Map III.









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