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M. Harunur Rashid
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FOREWORD

With this issue, Pakistan Archaeology enters its sixth year of publication. It is a matter of great pleasure and satisfaction that within this short period it has steadily grown in stature and gained popularity and recognition both in this country and outside. This achievement has not come easily and the difficulties were many. But the first difficulties and with them our major problems are over—thanks to the persistent efforts of Dr. M. H. Rashid and his staff.

We need hardly mention the necessity and usefulness of the journal as an organ of the Department. No. 1 and 5 give a brief but comprehensive survey of its work since its creation in 1947. Other numbers provide more detailed information regarding individual works. With the gradual expansion and increasing activities of the Department in different fields, the usefulness of the journal is likely to increase still more.

In recent years, the Department of Archaeology carried out a few major excavations of great importance. Unfortunately, they are as yet unpublished. We are now making arrangements for their proper publication. We are also planning for a more systematic survey of the less explored or unexplored areas of East and West Pakistan and for large-scale excavations at selected sites. To publish the results of these investigations regularly in the journal, we will have to find adequate space. With the addition of certain new features in this issue, the problem already stares us in the face. These considerations may make it necessary to bring out the journal twice a year, as was originally intended. But whatever may be the changes, we intend to maintain the standard and keep the cost of production under reasonable control.

Finally, I hope that this issue, like the previous ones, will have a favourable reception at home and abroad.

Nazimuddin Ahmad
DIRECTOR OF ARCHAEOLOGY
GEOGRAPHICAL
EDITORIAL

Recent field work and research in Pakistan archaeology have lifted many a veil from the past and have supplied much new information necessary to any reconstruction of man’s early history. Work in the prehistoric, proto-historic and historic periods has thrown much light on the successive stages of human evolution in regions which we now know as East and West Pakistan. But much is still missing and there are wide gaps in our knowledge which break the continuity of the story, and the archaeological problems which arise, from time to time, in the course of research hinder progress. They pose a tantalizing challenge and offer the archaeologist an exciting opportunity in the effort, both renewed and sustained, to seek, survey and reveal the human past. The Pakistan Department of Archaeology has taken its due part in this venture, and this Journal, its organ, records some of its activities and achievements.

The present issue, like the previous one, is bulky and some loss of quality is perhaps inevitable, but this has enabled us to introduce a new generation of younger archaeologists, and the topics of their discussion fairly represent the Department’s work.

This number does not contain any report on the activities of the Exploration Branch in respect of field work—there were none during the year. The report on excavation relates to Bhir Mound, the oldest city-site of Taxila. It was excavated earlier both by Sir John Marshal and Sir Mortimer Wheeler and the justification for a fresh operation there is given by the excavator in his introduction. The reports on conservation of monuments, museums, epigraphy and ethnology give some account of the increasing activities of the Department in these fields.

A number of research papers have been included in this issue and they provide a variety of information and views on art and archaeology in Pakistan. Among these, mention may be made of two learned papers
on the grand mosque and the coins of Banbhore, an early-Islamic site near Karachi, now identified with the ancient port of Debal. Although large scale excavation was undertaken here as early as 1958 and continued for eight consecutive years, no report on the work has yet been published. These papers present, in some form, an idea of that vast task. It may seem strange that none of the writers of the papers were ever directly connected with the operation, but their accounts have the necessary factual basis, supplied by the notes of Mr. M. A. Qadir, the excavator of the grand mosque sector. The excellent illustrations that go with them were prepared by Mr. H. A. Baig, photographer, and Mr. Maqbul Ahmed, his assistant, and were set by Mr. S. A. Bari, draftsman. Another interesting paper contains an analysis of the anthropological material from the recently excavated prehistoric cemetery of Sarai Khola near Taxila.

The printing of this issue has been slightly delayed for reasons beyond our control. Since the difficulties were not directly connected with the contents of the Journal, it is hardly necessary to mention them. We for our part have tried our best, and will continue to do so.

Finally, it is a pleasant duty of the Editor to thank the members of his staff: Messrs. M. H. Khan, publication assistant, Qudratur Rahman, proof-reader, S. A. Bari, draftsman, M. Haneef, stenographer, and M. Shafiqullah, typist, for their ungrudging assistance in the production work. Thanks are also due to Mr. H. H. S. Feldman for his valuable assistance and to Messrs. Inter Services Press, the printers of the Journal, for their cooperation and excellent service.

M. Harunur Rashid
EXPLORATION IN EAST PAKISTAN

(Plates I—I)

[The material for the following report was received from the Superintendent (Dr. Nazimuddin Ahmed), East Pakistan Circle, Dacca. Although the excavation of sites is not included in the normal function of that Circle, it conducted small-scale operations at Salban Vihara, Sitakot, Mahasthangarh and Katnerpara respectively.]

EXCAVATION AT SALBAN VIHARA

More than fifty archaeological sites are scattered over the Mainamati-Lalmai Ridge and its outskirts. Among them Salban Rajar Bari, presently better known as Salban Vihara, is the largest and has been subjected to thorough investigation.

Excavations at this site were first started in 1955 and continued with interruptions till 1968. During 1966-67 and 1967-68 seasons excavation work was mainly confined to deep digging in certain monastic cells, partly excavated during an earlier attempt. In addition, a debris mound close to the central shrine was probed. The detail is based on the report of Mr. M. A. Qadir, Assistant Superintendent of Archaeology who conducted the Mainamati excavations from 1963 to 1968.

1966-67 SEASON

During this season, cells Nos. 84, 85, 88, 90, 91, 92, 93 and 94 were taken up for deep digging. As a result, three major building periods were recorded in all of them. Attempts were also made to cut through the earliest floor with a view to finding out if there are remains of any earlier period below it. Scanty remains were detected in the shape of walls and cross walls which suggested the existence of earlier period structures.

Digging in these cells yielded a rich harvest of finds which included four gold coins of the late Gupta imitation type, a silver coin, ten gold rings, a bronze image with a line of inscription, six copper dishes a few
terracotta plaque fragments representing human and animal figures, a good number of ornamental bricks with various designs, and other petty objects.

Excavation on the Debris Mound, east of the central shrine, revealed a Votive Stupa. It is square in plan (17'-6" × 17'-6") with 9'-6" broad and 9" deep prominent projections in each side. The high basement is decorated with lines of mouldings and projected champhered frontons. At some places, surkhi lime plaster was found preserved. The stupa has been built on a 1'-6" high brick platform which provides an 8'-10" wide circumambulatory path around it. It is covered on top by rammed concrete. The drum, dome, umbrella etc. are missing.

A good number of terracotta plaques was recovered from the debris. The bronze image of Manjusri, with a line of inscription on its pedestal, which was also discovered in the debris on the eastern side was, perhaps, originally placed in a niche of the stupa.

1967-68 SEASON

During this season Monastic cells Nos. 87, 88, 95, 96, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111 and 112 were taken up for excavation. As a result of this excavation, some important architectural and stratigraphical evidence, associated with three building periods, has come to light. A good number of objects has also been discovered. Notable among them are twenty eight images, a gold coin, twenty one silver coins, an inscribed terracotta seal, a bronze replica of a stupa, a broken clay votive stupa, iron objects such as cutters, nails etc., and a few complete pots of different forms, sizes and purposes.

Bronze Images.—As mentioned above twenty eight images in all have been recovered during the season. Of these, two are female figurines, one is a replica of a stupa with sculpture and the rest are male figurines in sitting and standing postures. The images represent Dhyani Buddhas, Bodhisattvas, Padmapani, Bodhisakti Tara, Jambhala, Lokanatha, Ganapati etc. Some of the images are in a good condition of preservation and display excellent workmanship.

Coins.—Of the twenty two coins discovered, one is gold and the rest are silver. Even the single gold coin appears to contain some percentage of other metal. It belongs to the type known as late imitation
Gupta coins which are supposed to have been in circulation in East Pakistan about the 7th century A.D.

The silver coins bear, on the obverse, a representation of a bull couchant or in a kneeling position, surmounted by legend and on the reverse, the triratna, moon and sun symbols within a circle. In all these coins, excepting one, the bull symbol has been shown in a running posture and belongs to the well-known Pattikera series of coins.

Replica of a Stupa.—A beautiful replica of a Stupa in bronze was also found in a cell. Its cylindrical drum is surmounted by a hemispherical dome. Above the dome, rises the square hermika and the shaft of the umbrella consisting of two round discs. A band of three horizontal lines in relief with hanging chains decorate the surface of the drum. The small figures depicted in relief could not be identified.

EXCAVATION AT SITAKOT

About 4 miles north-east of Chorkai railway station, P.E. Railway, and about 2 miles north-west of Nawabgonge thana, headquarters of Dinajpur district, lies the small village of Fatehpur Marash. The area is characterised by a number of ancient mounds, Sitakund or Sitakot being the most prominent among them. The site had already been reported by Buchaman Hamilton, Westmacott and Strong. The name of the mound is associated, by legend, with the name of Sita, wife of Ramchandra, hero of the Ramayana epic.

The mound measures 270' × 260' externally, with an average height of 15 feet above the cultivated land and it concealed the remains of a monastic establishment. The enclosure wall of the monastery has been exposed at places.

It was mainly owing to the enthusiasm of and financial assistance by the Deputy Commissioner, Dinajpur, that excavation was carried out at this site. The mound was reportedly being damaged by local cultivators in order to obtain bricks and earth. The excavation was started on 20th April, 1968, and two cross trenches were laid to examine the features of the mound and to study its sequence chronologically.

Excavation here was carried down to a depth of 10 feet by cutting through seven layers. Two successive floor levels were encountered,
the lower floor being of lime-surkhi concrete. A ring well associated with the concrete floor was also exposed. A part of the outline of the monastery was exposed.

Excavation revealed four occupation levels. A few monastic cells, measuring about 12 feet $\times$ 11 feet were also exposed. They were provided with a 4 feet wide door passage leading to a 8 feet wide verandah in front. Corbelled niches, usually found in such ancient monastic cells as at Paharpur and Salban Vihara, intended as receptacles of lamps or images, were found relieving the otherwise plain surface of the walls.

Plenty of potsherds were recovered from this trench but more important find were the bronze images of Bodhisattva Padmapani and Manjusri which closely resembles the specimens recovered from Salban Vihara.

Discovery of the Northern Black Polished ware at the lower level of the western cell may eventually prove to be significant. After Mahasthan, this is the first site at which this type of pottery generally associated with the Maurya and Sunga periods has been recorded. Specimens collected from this site however, seem to be a late survival of degenerated series, manufactured in the earlier tradition.

After clearing a considerable portion of the boundary wall of the monastery, the original layout of the monastic establishment became clearly visible. It measures 215 square feet externally with an average surviving height of 1$'$ to 3$'$. The wall was found damaged at places due to sporadic brick-stealing in the past.

**Excavation At Kanjir Hari, Katnerpara, Bogra**

The mound popularly known as Kanjir Hari (Store house of wine) is situated at Katnerpara, in a thickly populated area of Bogra town. It measures 275$'$ $\times$ 250$'$ and is surrounded and encroached upon by hutments. The height of this mound ranges from 7 feet to 10 feet. Its eastern side was greatly disturbed by local people who levelled the ground in order to construct their houses. In the course of these cuttings, a portion of buried wall was exposed. The news was reported by the Curator, Dacca Museum, who suggested that the Department of Archaeology may undertake a test excavation to examine the nature of the buried remains.
The Curator also offered to meet the expenditure on this trial digging from some funds at his disposal. The Department agreed and a trial excavation was accordingly undertaken.

At the beginning, the results were not encouraging, as little evidence of occupation was available, but later, a structural complex was partly uncovered which is believed to be the remnant of a temple. It is nearly built of baked bricks laid on mud mortar and bears a close resemblance to the Paharpur Temple of the Pala period. The size of the bricks used is not uniform. It varies from $10'' \times 5'' \times 2\frac{1}{2}''$ to $1'2'' \times 10'' \times 2\frac{1}{2}''$. The lower basement of the building is decorated with moulded and dressed patterns.

A few pieces of terracotta plaques, representing the typical folk art of the Pala period and some net sinkers were recovered from the excavation. Pottery finds include sherds with an incised grid design and in some cases with red slip.

**Excavation At Mahasthangarh**

In March, 1969 the Department started digging at the famous site of Mahasthangarh where excavation had been done in the past with encouraging results. The main aim of this excavation was to expose the fortification wall on the north-eastern side of the citadel mound which occupied a prominent place in this particular portion. It rose to a maximum height of about 38 feet from the road level.

In order to reveal this fortification wall a long trench was sunk across it. As a result a curved wall was also exposed towards the eastern side. A number of building periods were detected while uncovering the wall. The earliest phase of the wall seems to be associated with the Pala period.

There was no notable find from this excavation. Antiquities, besides pottery chiefly consisted of terracotta figurines, toys, ornamental clay balls, cones, net-sinkers, beads, discs, and oil lamps etc. In addition to an unidentified gold coin, a grey globular pot and a few carnelian and crystal beads were also found.
EXCAVATION AT BHIR MOUND TAXILA

by

Mohammad Sharif

(Figs. 1—24. Plates III—XV)

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INTRODUCTORY

The geographical position of Takshasila, or Taxila, lying on the tri-junctional route connecting it with Western Asia, Central Asia and India played a very important part in the history of this city. Its location within the Indus System also linked it with the Arabian Sea and the Persian Gulf. It can fairly be concluded that it is to these very reasons the city owed its initial existence, as well as its subsequent prosperity and greatness, and when these trade contacts with other countries were interrupted, the city sank eventually into insignificance. As the ancient Greek writers, Chinese travellers and other Indian sources have described it, it is not surprising that for nearly a thousand years the city, on three successive but adjacent sites (Bhir Mound, Sirkap and Sir-Sukh), ranked high amongst the cities of Asia, and that its civilization for much of that time provided are markable link between East and West.

Besides all this Taxila enjoyed the distinction of being the most explored ancient site of the Indo-Pakistan sub-continent. For more than twenty years it was excavated, year by year, under the direction of Sir John Marshall, the then Director-General of Archaeology in India. The results of these excavations were published in three volumes in 1951.

The present report, which is the out-come of special celebrations in Pakistan on the happy occasion of the Coronation of Their Imperial Majesties, Shahinshah Arya Mehr and Shah Bano of Iran, has well served its purpose. It also served the purpose of imparting field training to local and foreign students of the Department of Archaeology, University of Peshawar.

The present work, though limited both in time and space, has yielded fruitful results in revising the earlier chronology on the site. A brief statement on the short season's excavations at the site are described below.
ACKNOWLEDGEMENTS

The excavation described here was carried out at the suggestion of Dr. F. A. Khan, S.I., T.Pk., Director of Archaeology and Museums in Pakistan. I am greatly indebted to him for assigning to me this important task and for all his guidance and encouragement in the course of digging at Bhir Mound and during the preparation of this report. I also owe thanks to Dr. Ahmad Hassan Dani, S.I., Chairman, Department of Archaeology, Peshawar University, Mr. S. A. A. Naqvi, T.I., Superintendent, National Museum of Pakistan and Dr. M. A. Ghafur, Superintendent, East Pakistan Circle, for the encouragement I received from them from time to time. I am grateful to Dr. Harunur Rashid, Superintendent of Publications, for his help in the preparation of this report. Throughout the work, I was assisted by my colleagues Mr. A. A. Farooq and Mr. M. A. Halim, Field Officers. Grateful mention must also be made of Mr. Sadar Din, retired Exploration Foreman, Mr. Abdul Hamid, Camp Supervisor, Mr. Manzoor Ahmad Siddiqui, Senior Draftsman for preparing the drawings of the structural remains and sections in the field. The drawings of pottery, stone, metal and other small finds have been prepared by Mr. Hassinuddin Qureshi, Senior Draftsman. The photographs of the site were taken entirely by Mr. Hasan Shakir Jaffri, while those relating to pottery and other objects were produced by Mr. Motiur Rahman and Mr. Ilyas, photographer and photoprinter of the Exploration Branch. Thanks are due to Mr. Abdul Qayum, Assistant Modeller Mr. Ahmadur Rahman, Pottery Recorder.

Outside the Department, I am most thankful to the Chairman, Department of Archaeology, Peshawar University. He not only personally visited the site several times and advised on knotty problems, but also spared his staff member, Mr. Sadar Mohammed and Mr. Tanaba, Mr. Vira-pani and Mr. Bashir, students from Japan, Thailand and Pakistan respectively.

Finally, I am deeply beholden to all these persons and to those who were associated with the work either during the excavation or in the completion of the report.

NAME AND HISTORY OF THE SITE

Taxila or Takshasila has a long but chequered history which goes deep into antiquity. Legendary tradition takes it to the heroic days of
the *Ramayana* and the *Mahabharata*. The *Mahabharata* relates that the city was conquered by King Janemejaya of Hastinapura, who performed there the great snake sacrifice. According to the literary sources of the *Ramayana*, the city was founded by Taksha, the son of Bharata and the nephew of Rama at the same time as Pushkalavati was founded by Pushkala in Gandhara.¹

Recently, the discovery of Sarai Khola, about 2 miles south-west of Bhir Mound, has pushed back the history of this region and has placed Taxila on the pre-historic map of Pakistan. The late stone age implements superimposed by the Kot-Dijian culture not only help in providing links with established agricultural communities of the Indus valley but has opened important and exciting possibilities in regard to the beginning of the pre-historic civilization in the Ghandhara region.

However, the history of the site begins with the conquest of the area, then known as Gandhara, by the Achaemenians during the 6th century B.C. Taxila came into prominence when, in 326 B.C. Alexander the great, after subduing the Persian Empire, pushed his way into the Ghandhara region. Ambhi (Omphis) the king of Takashasila, who was at war with the neighbouring Paurava king (Porus), beyond the Jhelum, not only submitted to Alexander without any resistance but also helped him by supplying a garrison of 5,000 troops² from his own army in a battle against Porus. Before his departure, Alexander established a Macedonian garrison here under Philip but soon after the death of Alexander, that garrison was ousted by Chandragupta Maurya. During the rule of the Emperor Asoka, when Buddhism became the predominant religion of the empire, Taxila was regarded as an important centre of Buddhism.

With the coming of the Bactrian Greeks, the city was shifted from Bhir Mound to Sirkap and the next references to these historic remains are traceable from the numismatic record. The Greeks were followed by the Scythians, the Parthians and the Kushans. It was in the time of the Kushans, that the city was shifted to a third location known as Sir-sukh. The overlords of these ruling dynasties gave a new aspect to the city apparently with a special bias derived from Greek traditions. Then, in the early decade of the 5th or 6th century A.C. it faced the horror of

¹ A complete cross-section cut down to the virgin soil at Bhir Mound represents intensive occupation from 4th-3rd century B.C. to 1st century B.C. Thus its history for a longer period runs almost parallel to that of Pushkalavati (Charsada) in the former province of N.W.F.P.

² Cambridge History of India, I, p. 329-33.
Fig. 1.
indiscriminate destruction by the White Huns from which it never recovered.

The city was prosperous, lying on the tri-junctional route connecting western Asia, central Asia and India, and has been well described by the Greek writers Arrian, Strabo Plutarch and the Chinese pilgrim, Hiuen Tsang. All of them have left glowing accounts of its greatness, the fertility of its soil, its invigorating climate and its rich harvests.

BHIR MOUND AND ITS ENVIRONMENTS

The remains of Bhir Mound, Lat: 33°.44† N and Long: 72°.49‡ East, close to the Archaeological Museum and the Taxila Railway Station, is situated about 22 miles north of Rawalpindi. Located on a small plateau, the site extends from north to south, covering an area of 1200 × 730 yards, and rises to an average height of 60 to 70 feet above the Tamara Nala which separated it from Sirkap, the second city of Taxila (Plate III). It was Alexander Cunningham¹ who correctly identified the ruins as those of the ancient Takshasila or Taxila of the classical writers.²

Subsequently, from 1913 to 1934, large scale excavations at Bhir Mound, brought to light an irregular and haphazard city lay-out, very different from the symmetrical and well planned later city of Sirkap. The deep digging carried out at a number of places at the site showed four successive strata of which the lowest dates back to the 6th—5th century B.C. While the second (from bottom) has been ascribed to the time of Alexander the Great i.e., 4th—3rd century B.C. The third stratum, to which the major part of excavated remains belong, has been assigned to the Mauryan period and the fourth to the period when the city under the Bactrian Greeks, was shifted to a new site at Sirkap.

To acquire more knowledge about the early phases of the history of this region and to facilitate its study, excavations on the site were long overdue. It was with this end in view that the Department of Archaeology started excavations in 1967 using the improved and scientific method of stratigraphical digging.

SUMMARY OF RESULTS

Horizontal digging in a small area did not yield any complete plan of a house, but fully and partially exposed rooms, lanes and street

¹ See his Report of the Archaeological Survey of India, Vol. V.
² A. Cunningham, Archaeological Survey of India, Report II, (Simla, 1871).
have revealed a haphazard and irregular layout in the last Building Period IV.

Deep digging carried down to the natural soil in a very small area revealed four major Building Periods.

Sir John Marshall claimed the earliest settlement at Bhir Mound to be the Achaemenid Period, the first city of Taxila. The results of the present excavations although confirming that it is the earliest city of Taxila, still lack much in cultural material to prove its being the Achaemenid Period settlement.

The existence of drains and soak-wells revealed elaborate drainage and soakage arrangements in Building Period IV, and the existence of a large scale iron industry in the locality is definitely indicated by the discovery of much iron slag from the cultural debris of the last Building Period IV.

CULTURE SEQUENCE AND MAIN CHARACTERISTICS OF DIFFERENT PERIODS

Previous excavations on the site were not placed in a strict stratigraphical context. The main objective of the present excavation was therefore to dig stratigraphically to ascertain the succession of cultures at the site and to produce a related time scale. For this purpose, a restricted area, represented by a single cutting (AI/14-19, 13½ × 12') was trenched and dug vertically down to the natural soil. This choice ensured a complete section of the Mound. Fig: 3 The excavation exposed a 17 feet deep continuous sequence of occupational deposit of orderly stratification relating to four Periods (numbered I to IV from bottom to top).

All the four Periods were characterized by their typical ceramic industries, and cultural equipment such as metal tools, terracotta figurines. The main characteristics of each Period are outlined below beginning with the earliest.

Period I

Since digging in these deep levels was restricted to a very small area, pottery and other finds were not many. The outstanding feature of this period is the presence of iron. In the context of general archaeological stratigraphy this occurrence belongs to the early phase of the use
of iron in Pakistan. After a critical review of the evidence, archaeological and historical, it has been averred that iron was introduced into the north western plains of the Indo-Pakistan sub-continent by the Achaemenid conquerors who extended their empire into the region in the latter part of the 6th century B.C.1

In the ceramic industries of this period, the only familiar pottery fabric consisted of small sherds of the so-called N.B.P. ware which has rightly been termed a god-send to the archaeologist.2 Unfortunately, there is no unanimity about the initial date of this ware but, even on conservative estimates, it is not likely to be later than the 5th century B.C. in the nuclear region.3 What concerns us most in regard to the evidence from Bhir Mound is the period of its diffusion in the peripheral area. A single sherd from Swat and about a dozen sherds from ‘Charsada, in the vicinity previously recovered from layer (22) and upward has been dated back to the 3rd century B.C.4 During the course of previous excavation by Marshall, eighteen sherds were recorded from the site. It is noteworthy that the larger number came from between 7 feet and 13 feet below the surface, only two fragments being higher than a depth of 7 feet (one at 4 feet 10 inches and one of 6 feet 2 inches).5 There is good evidence, particularly in the form of two coins hoards6 recovered from the previous excavations on the site that the occupation level at the average depth of 6 feet below the surface is approximately of 300 B.C.7

N.B.P. ware must have taken time to spread in the adjoining distant particularly in the north western area and in the light of the above mentioned facts, it can fairly be presumed that the N.B.P. ware on the site was introduced some time in the 4th-3rd century B.C.

B. Period II

Owing probably to the limited area in which the earlier levels were exposed, the antiquities and pottery relating to this Period is small. The small number of vessels recovered from this level provides only limited scope for judging their characteristics. The salient feature of this

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6 Ancient India, No. I, (1946), p. 27.
period is the increase noticed in grey ware while N.B.P. ware had markedly dwindled in quantity. Some of the grey ware has black slip and other specimens have a black surface with a grey core.

The pottery group from this level is mostly plain, with the exception of a few red specimens bearing mat designs. The grey ware is, as a rule devoid of all decoration. The whole group is marked by the complete absence of painted decoration of any sort, and moulds are never used. Among minor antiquities, a cornelian, glass beads, stone weight and grinder, bone antimony rod and iron nails are recorded.

C. Period III

The cultural equipment of this Period stood in marked contrast with that of the preceding period. Except a single sherd of N.B.P. specimen of this ceramic were almost exhausted in this period. The grey ware had degenerated in form and fabric and had become more coarse and dull. Instead, there was exclusively a red ware industry. The pots were all wheel-turned and generally had a medium grained fabric. Among the more important types mention may be made of bowls with incurved rims, ghara or water vessels with a thick out-turned simple, grooved and distinctively flanged rims, rimless cooking-vessels with sharply carinated shoulders, clubbed rims, plain and corrugated shoulders.

Among metal objects, the use of iron was distinctively recorded. This signifies a considerable advance on the technological side and points towards a revolution in the economic condition of the people following the previous Period. The more notable iron objects included, nails, hooks, knife blade and key. Among copper objects of the Period, there were antimony rods and nail parers.

Terracotta objects included animal and human figurines, but whereas the former were all hand modelled, the latter included some which were cast in a mould. In the female figurines the 'Baroque lady' type was prominently recorded.

Amongst other terracotta objects mention may be made of toy cart wheels, triangular and oval seal tablets bearing impressions showing 'crescent-on-hill' and 'elephants'.

Beads and bangles formed an interesting collection. Shell have been commonly used both for beads and bangles in this Period. Among stone artefacts, we found saddle quern, muller and spherical stone weights.
D. Period IV

Period IV, at the top, yielded a fair number of coins, terracotta human and animals figurines, votive or ritual tanks and seals. These coins are square, uninscribed cast coins, which have, on the obverse "lion-with svastika-on-top" and "crescent topped arched hill" type while the reverse is invariably mutilated and indistinct. These coins apparently belonged to the local Taxilan currency which was in wide circulation after the fall of the Mauryan Empire. According to Vincent Smith, these coins may be dated a little before the Christian era. 1 Recently, Dr. Dani 2, has also suggested a post-Mauryan date for such type of local Taxilan currency and it may, therefore, be reasonable to assign them to the 2nd to 1st century B.C.

The evidence of these coins is also fully corroborated by the evidence of seals belonging to the same cultural Period. Palaeographically, as noticed elsewhere, these seals may be assigned to C. 150 B.C. to 50 B.C.

A fairly large number of Terracotta human and animal figurines were also recovered from this Period. Previously, terracotta of this type has been assigned to the Mauryan 3 and Sunga Periods by authorities on art 4 and for them, a date between 200 B.C. to 50 A.D. meets with general approval. 5

Among other terracotta objects, mention may be made of square-form ritual or votive tanks of which similar examples have been noted at other sites such as Kausami, Hastinapura and Ahichhatra. 6 At the latter site, their first introduction is dated around A.D. 100-200. They are described as foreign in origin, are attributed to the Parthians, and are said to be associated with the cult of the Mother Goddess. 7 Previously, Marshall has enumerated three varieties of such tanks from Taxila and a similar simple, square-walled example recovered from Sirkap has been dated back to the Parthian Period? i.e., 1st B.C. which is more appropriate when dating this cultural period of Bhir Mound.

Chronology

The digging, restricted as it was to time and area, did not yield

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2 J. N. S. I., XVII, Part II, p. 27-32.
4 Coomar-Swamy A. K. IPEK, 1928, p. 65.
6 V. S. Agrawala, Terracotta figurines of Ahichhatra District Bareilly, U.P.A.I. No. 4, p. 178.
7 Ibid., p. 125.
any numismatic or other datable evidence, in the absence of which there was no other means by which to work out the chronology of the site except the study of other cultural material. Even the potsherds and other minor antiquities were few, scanty and insufficient thus presenting difficulties in working out a chronological sequence of the site. In this context, the indispensable method of relating stratigraphy to an absolute timetable offered peculiar difficulty. However, on the basis of an established stratigraphical interrelationship among various types and groups of objects, the procedure was to postulate a series of possibilities and try them out against one another until at last they were found to work within reasonable margins of logic and certitude. With these limitations and drawbacks, the chronology of the site, since it is based on ware comparable with other sites, must be regarded as tentative. Further work may confirm or alter the suggested dates assigned to the cultural material of the site, but their relative sequence will remain unchanged.

In the absence of any datable evidence, the basic chronology of the site can be fixed on the evidence of (1) N.B.P. ware (2) Punched marked and uninscribed coins (3) Terracotta i.e., human, animal figurines and the occurrence of votive tank pottery types and last, but not the least, on (4) the totality of other cultural material found in each period. The co-relation and comparison of this cultural material with the mass of materials published by Marshall in three volumes on Taxila, material from the stratigraphical diggings at Sirkap by A. Ghosh, Charsada by Mortimer Wheeler, Shaikhan Dheri by A. Dani in the close vicinity and a large number of excavated sites in the Ganga-Jumna Doab has helped much in determining a relative chronological sequence of the site.

As already indicated above (P-13) the chronological horizon of Period I is dependant on the dating of the N.B.P. ware and allied evidence from early historical sites in the vicinity and, as a whole, in the Indo-Pakistan sub-continent. In this connexion, attention may be drawn to the stratigraphical position of this ware at the well known site of Charsada and the results previously achieved there by Marshall. In the representative section of the excavations at Charsada the N.B.P. ware available from (22) upward have been dated back to 3rd century B.C. In its nuclear region, even on conservative estimates, it is not likely to be later than the 5th century B.C. In the light of the tri-junctional position of Taxila it can be fairly presumed that immediately after its first origination it was introduced at Taxila for which a relative date i.e., 4th century B.C., as pre-
viously concluded by Marshall appears to be more reasonable. Counting from bottom Marshall placed this ware in the second stratum while in the present excavations it was recovered from the layers right above the virgin soil in Period I. Since Marshall’s excavation were not carried out with strict stratigraphical discipline, some oversights can be expected.

The overlap between the upper strata of Bhir Mound and the lower of Sirkap site as borne out by Marshall and re-checked by Ghosh at Sirkap, once again holds good as observed by comparison of materials from both these sites. In this respect, mention can be made of local Taxilan currency, terracotta human, animal and bird figurines, votive tanks, gadrooned and collared beads, stone weights, querns and millers, pear-shaped vases, ghara or water vessel with flanged rims, bowls with incurved rims, bone, ivory and metal objects. It can also be seen from the stratigraphical tables given by Marshall that there is a continuity right through from strata II and I of Bhir Mound to strata VII, VI and V (numbered by Marshall) of Sirkap.

This co-relation and comparison of cultural material from the last Period of Bhir Mound with that of early level of Sirkap affords the easiest clue. In the light of this presence and continuity of cultural material, the terminal date for the settlement at Bhir Mound can be safely fixed between the 2nd to the 1st centuries B.C. Between these two postulates i.e., beginning and end of occupation on the site, the dating of the two intermediary Periods i.e., II and III remains largely a matter of guess work.

In the study of the cultural material as whole from bottom to top i.e., Periods I to IV, a conspicuous change in material revealing a marked difference was prominently noticed between Periods I-II and III-IV. There is some a priori reason to believe that Periods IV-III at Bhir-Mound marks a definite change from Periods II and I. Since the diggings in the lower level were confined to a small restricted area, this change should not be over emphasised. In the light of the proposed date it appears that the early levels are of Mauryan and pre-Mauryan eras while the subsequent two may be of autonomous and Greek Periods.

Within these limits the following rough dates may be proposed for the cultural periods, of the city as revealed in the present excavations:

<table>
<thead>
<tr>
<th>Period</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period I</td>
<td>4th—3rd B.C.</td>
</tr>
<tr>
<td>Period II</td>
<td>3rd B.C.</td>
</tr>
</tbody>
</table>
BHIR MOUND EXCAVATIONS
TAXILA 1967-68
PLAN OF DEEP DIGGING

REFERENCES
ROOM, WALL .......... R W
FOUNDATION, DRAIN .. F D
P-I .................. 
P-II .................. 
P-III .................. 
P-IV .................. 

SCALE

Fig. 2.
EXCAVATION

Period III  3rd—2nd B.C.
Period IV   2nd—1st B.C.

EXCAVATIONS

Close to the north of Wheeler’s trench dug in 1944-45, at Bhir Mound, an area measuring 80 feet long and 60 feet wide was selected for preliminary excavation.

Owing to the limited nature of the excavations in the area, only partial plans of rooms, halls, corridors, lanes and streets could be uncovered. A number of soak wells, either of stone masonry or earthen ware jars placed one above the other and fully or partially covered or completely open drains, represents an elaborate drainage and soak-pit arrangement for the city.

Deep diggings were carried down to the virgin soil at a depth of 17th feet in two squares, revealing structural remains of four distinct Building Periods. It is clear from the plan that most of the exposed remains belong to the last Building Period.

There is also evidence that some of the earlier walls were incorporated by the later builders in their own plans. At one place, as many as three walls were observed, one above the other, clearly revealing three building levels. The study of the structural remains, supplemented by stratigraphical evidence, leads to the conclusion that habitation on the site was continuous and that there was no break in its occupation.

STRUCTURAL REMAINS

The Period-wise description of all the four Building Periods (No. I-IV) from bottom to top is summarized below:—

Period I: Within the limited area under deep digging, the remains of Period I were represented by a single course, stone wall-I and the base of a circular-shaped stone pillar (Plate IV-a Fig: 2). Resting on the virgin soil, the pillar base about 2 feet 8 inches in diameter, survived to a height of three feet consisting of twelve courses of stone, while only a single course was observed in the wall. Lime-stone and river pebbles were used in the rough masonry of the wall as well as in the pillar. Its associated floor, reached at a depth of 16 feet from top in layer (15), was indicated by a fire-place and pots in situ. Except a few red, grey, black-polished
plain potsherds, no other significant cultural material was recovered from I. This may possibly be due to the limited area of excavation.

Period II: Remains of four stone walls, termed 2, 2A, 3 and 4A respectively, came to light in Period II (Fig: 2). At this level, traces of another pillar, superimposed upon the circular shaped stone pillar of Period I, was observed (Plate IV-a). This pillar of Period II was marked by its upward tapering shape, as well as by its different alignment from earlier specimens. It survived to a height of 2 feet 8 inches with nine courses of lime-stone set with Kanjur stones on its top. Wall 2, running from north to south, was exposed for a length of 15 feet 6 inches and with an 18 inch foundation, it survived to a height of 3 feet. On its southern end, wall 2A running in an east-west direction was partly exposed, projecting under the pebbled foundation of wall 7A of Period III. On the western side of wall 2, another wall, termed 3, running parallel, was exposed in a different alignment under wall 6 of Period III. Its closeness to wall 2 indicated that the people who constructed the former were aware of the existence of the latter. Wall 4 showed three Building Phases of 4A, 4B and 4C, belonging respectively to Period II, III and IV, raised one above the other in the same plumb. The wall running east-west (4A) at the northern end of walls 2 and 3 was traceable to a height of 1 foot 2 inches, with four courses of lime-stone masonry.

The masonry of these walls was characterized by rough rubble, set in lime. The only floor, (marked 12A) of this period, was encountered with a large storage jar in situ and a concentration of pieces of charcoal (Plate IV-b).

Owing to the limited area of excavation no detailed plans of the rooms belonging to this Building Period could be obtained.

Period III: Period III was recorded with additions, alterations and repairs in the original lay out of the remains which can be divided into two sub-building phases. The details of these two sub-periods, from the earlier to the later phase, can be summarised as follows:—

Phase I: Five walls termed 4B, 5, 6, 7 and 7A were recorded in this earlier Phase I (Fig: 2). Wall 7, running in a north-south direction for sixteen feet, was traced to a maximum depth of 5 feet 6 inches. Its southern end, where it takes an eastward turn, was numbered 7A. Wall 7A was found to be missing for the greater part, its 1'4' high pebbled founda-
tion only remaining. Running parallel to it, on the western side of wall 7, the remains of wall 6 were recovered above the earlier period wall 3. A drain-opening, about one foot in width, was observed in wall 6. On the northern extremity of walls 6 and 7, the remains of Period III, represented by wall 4B, were found running in an east to west direction. Wall 5, roughly extending from east to west, was fragmentary while wall 8, running north-south, with its tapering courses, was also observed to be damaged.

Layer (8A) revealed the floor of this phase, which was evidenced by the presence of a stone pavement with a fire-place and a pot in situ (Plate V-b).

Phase II: In Phase II, two walls, numbered 9 and 11, both running from east to west, were partly exposed, while the remains of two other walls, termed 10 and 12 extending north-south, were found to a height of 1 1/4 feet and 3 1/4 feet respectively (Fig: 2). The earlier phase wall 7 was observed to be repaired in this sub-period using Kanjur stone at its top. The floor of this phase was indicated by a layer (7A) with pots, potsherds and pieces of charcoal lying scattered over it. Limestone was used largely in the earlier phase while Kanjur stone replaced it later. No definite conclusion regarding the actual layout could be drawn owing to the highly fragmentary condition of the exposed structures.

Period IV: A large number of stone walls uncovered in Building Phase IV, yielded complete, and sometimes a partial, plans of large and small rooms, courtyards, halls, lanes and streets (Plate VI, Fig: 1). A number of drains and soak-wells were also unearthed at the same level. The exposed structural remains were built in an irregular and haphazard manner and the lanes were so narrow that two persons would often find it difficult to walk abreast.

In this last Building Period, deep digging was carried out at a number of places, viz., along the outer face of the western wall, a big hall termed 'Y', the eastern side of rooms 'B', 'C', 'D' and 'E' and along the outer face of the southern wall of room F/1. In order to trace out the depth of earthenware jar soak-walls, and also to study the character of the stone wall in the west, excavation in room 'Q' was carried down further which revealed as many as three occupational levels, with distinctly marked evidence of break in all of them.
BHIR MOUND EXCAVATIONS
TAXILA – 1967

STRATIGRAPHY

1. Loose soil of light brown colour.
2. Compact gritty, clayey soil of light brown colour.
3. Loose ashy soil with large stones, Potsherds, Bones & Iron slags.
4. Clayey soil of light brown colour was noted with potsherds, bones and bits of charcoal.
5. Light brown clayey soil yielded a few potsherds and charcoal pieces.
6. Ashy deposits were recorded with concentration of charcoal pieces.
7. Light brown compact clayey soil.
8. Light brown compact clayey soil with a lot of charcoal pieces.
15. Compact clayey soil of light brown colour.
16. Clayey soil of light brown colour revealed a few potsherds and charcoal pieces.

SECTION LOOKING EAST
Between Squares AI/4 - 9 - 14 - 8 - 19

SCALE
Foot 1 0 1 2 3 4 5 Feet

Fig. 3.
The earliest floor level reached at a depth of 6'-9" from the top in layer (5B) was recorded with a bottle neck elongated jar, an open-mouthed pan and bits of charcoal, ash marks and bone fragments (Plate VIII-a).

The second floor level was marked by the existence of cover drains (4), a stone slab and a group of pots in situ (5).

The third and the last floor level, at the top, revealed by the location of surface drains 4, 5 and 6, and by the stone-built soak-wells 1 to 4 and a group of pots in situ on the floors inside various rooms and courtyard, was recorded in layer (4) (Plate V-a).

The study of the structural remains in the last Period IV revealed large scale building activity. Showing a long use, and re-use, of stone walls. However, a large number of changes and later constructions clearly revealed an overlapping i.e., some of the earlier structures were still standing when some new structures were erected.

A brief description of the structural remains in this period is as follows:—

ROOMS

The complete or partial plans of a large number of Rooms A, B, C, D, E, F/1, F/2, G, H/1, H/2, J, K, L, M, N, O/1, O/2, P, Q, R, S/2, T, V, U and Z of varying dimensions were uncovered. Rooms B, D, E, F/2, H/2, J, K, L, M, N, O/2 and Z with their wall penetrating under the unexcavated area revealed only partial plans, while Rooms A, C, F/1, H/1, O/1, P, Q, R, S/2, T, V and U were fully exposed. Rooms H/1, F/1 and C were comparatively larger in size (Fig: 1).

Room 'A'

Somewhat centrally located at the southern end of the area under excavations, the plan of Room 'A' was completely exposed. All the three walls i.e., in the west, north and south of this room adjoined the outer face of the western wall of Hall 'Y' ending at a higher level and apparently revealed a later addition. Above a 1½ feet high foundation, the structure of the walls was preserved to a height of 2'-2". A 4½ feet wide opening in its northern wall revealed a doorway to the room.

Room 'B' and 'C'

Both Rooms B and C divided by common partition walls were uncovered extending in a north north west to south south east direc-
tion on the south western side of the area under excavation. Room C
in the north with a 1 1/4' wide stone wall measuring 8 3/4' on the north to 9 3/4' in the south and 11' in the west to 10-5' in the east, clearly revealed its planning. A 4 1/4 wide damaged portion on the southern end of the eastern wall revealed a doorway. Room 'B' with its walls extending southward under the unexcavated area revealed a partial plan. In both these rooms, floor levels were revealed by a group of pots and charcoal pieces were recorded on this layer (4).

**Room ‘F/1’ and ‘H/1’**

Similar to Rooms B and C, two more Rooms F/1 and H/1 were uncovered almost in the same direction. Room H/1, to the north of F/1, running north south with a 1 1/4' wide stone wall, measured 15 1/2' × 9 1/2' while Room F/1 roughly rectangular in plan was 12 3/4' × 8 1/4'. The partition wall between these two was damaged. The southern stone wall of Room F/1 penetrating under the east west baulk was partially exposed.

In both these rooms the occupational level was recorded at a varying depth of 4 1/2' in the north and 3 1/2' in the south in Layer (4).

**Room ‘G’**

Room ‘G’ small and rectangular in shape, was exposed on the eastern side of Room F/1. The southern wall of this room penetrating under the east-west baulk was partly exposed. A 6-1' wide opening in its northern wall clearly revealed a doorway. A rectangular platform of stone exposed in the doorway appears to have blocked it in some later phase.

**Rooms ‘P’, ‘Q’ and ‘R’**

All these Rooms, P, Q and R, extending in a north south direction were located on the eastern side of the open Courtyard ‘I’ A north-south continuous common wall divided the latter from the former. Parallel to this north south long wall in the west, remains of another stone wall were uncovered in the east. Between these two long parallel walls, two cross walls divided the area into three Rooms P, Q and R. Room P in the north reveals two stone lined, partially covered, drains 5 and 6, while in Room Q, two earthenware jar Soak-wells were recovered in close juxtaposition. The rectangular shaped Room R in the south did not reveal any significant information.
Rooms ‘T’, ‘V’, ‘U’ and ‘S/2’

The structural remains of these four Rooms divided by common partition walls were exposed on the other side of the north-south continuous long stone walls of Rooms P, Q and R in the west. A 3'-7' wide opening on the northern side of Room S/2 revealed a doorway. Room T, smaller in size, was probably used as a store. An open-mouth, elongated storage jar with an applied band of decoration round the shoulder was found in situ (Plate VII-b). In the common partition wall of Room T in the west and S/2 in the east, a 2½' wide break revealed a window opening. On the southern side of Room S/2' and T remains of another two Rooms, V, and U, divided by a common partition wall, were unearthed and marked from west to east respectively.

Rooms ‘W’ and ‘X’

The remains of two unusual north south, long structure were marked as Rooms W and X. The length of Room W in the north was three times its width. The western wall of this Room, built with single course Kanjur stone, apparently revealed a later addition. Room X in the south was longer than Room W and the proportion of length to width was 1:4½.

Courtyard ‘I’ and S/1’

In the absence of any substantial structural remains revealing a plan, two vacant places with the existence of soak-wells were recorded as open courtyard. Among these two courtyards, one, uncovered, in the north-west side of the area under digging was recorded with two i.e., east-west and north-south long stone walls in the north and east respectively. A circular shaped soak-well (I) was recorded in the north eastern corner of the courtyard. A group of pots, terracotta animals, figurines and slate slabs in situ revealed a floor level in layer (4). The partly recovered east-west long courtyard S/1 was noted with the existence of two circular shaped soak-wells 3 and 4 lying very close in juxtaposition.

Hall ‘Y’

In the south, on the western side of the 75 feet north-south long stone wall, structural remains of another 38 feet long wall, running parallel to the former was recorded with crossed walls at both ends and yielded the plan of a north-south long rectangular Hall Y. The entire
width of its western wall could not be exposed owing to the baulk lying over it.

LANES

Lane 1

Lane-1, extending in a north-west to south-east direction, was recovered on the western side of Rooms B, and C. E with a maximum width of 3\frac{1}{2} feet it was recorded with a one foot wide stone wall in the west and an additional single file stone laid against the outer face of the western wall of Room B and C. On its northern end, a crossed stone wall, lying in an east-west direction, revealed its blockade in the later period while in the south it penetrated under the unexcavated area.

Lane-II

Almost in the same direction and with identical features, lane-II was exposed on the western side of Rooms H/1 and F/1. It was partially uncovered, penetrating under the baulk in the south and unexcavated area in the north-west. On its northern end, a cross stone wall was resting on its eastern side and revealed its blockade in the later period.

STREET

The eastern end of the area under excavation exposed a 75 feet north-south stone wall. Still lower, it was traced down to a depth of 4'-2' in which a maximum of 12 courses of lime and Kanjur stone were counted. It was found damaged at a number of places so has slightly changed its true alignment on the top. At its northern end, a 2'-4' wide break in the masonry of the wall leads to the conclusion of a passage which was probably blocked in the later period. In the absence of any substantial structural remains in the east, a street may be fairly presumed.

DRAINAGE

Six drains, both large and small, were observed, either completely open, or with full or partial coverings. They belong to the last Building Period IV, and as only one open drain I was recorded in Period III, their presence suggests an elaborate and efficient drainage system in the last Building Period.

MAIN DRAIN

Drain 2, with a maximum width of 2 feet 5 inches, running diagonally
in the north north west to south south east direction, was exposed at a lower level on the eastern side of rooms ‘B’, ‘C’, ‘D’ and ‘E’. At the northern end of the western wall of the drain, an opening, measuring 1’-10’ in width marked by a large stone slab on top, suggests the existence of another small drain branching off from the main drain. The clayey earth and silt inside the drain were the result of rain deposits.

OPEN DRAIN

In the top level of Building Period IV, a small open drain 4 was uncovered at a depth of 2½ feet in room ‘D’. In the north after a semi-circular bend, it turns towards main drain 2 in the east.

PARTLY COVERED DRAIN

Two stone-lined drains (6 and 5), one from the north and the other from the east, were exposed, partly covered with limestone and a slate slab respectively. They meet each other before proceeding to soak-well No. I in the west and pass through a 10 inch wide opening, which was noted in eastern wall of courtyard ‘I’ (Pl. VII-a).

COVERED DRAINS

The existence of a covered drain No. 3, extending from south south west to north north east was partly exposed in layer (5). This stone-lined drain was found covered with stone slabs. The covered part of the drain measures 7’-7’ and has four slabs.

SOAKAGE ARRANGEMENTS

As many as six soak-wells were uncovered in the last Building Period IV. They were made either with earthen-ware jars or stones in circles. Of these soak-wells, four were built of stones forming rings while the remaining two were formed by earthenware jars. The existence of the soak-wells suggests that each individual houses was provided with its own soakage arrangements.

STONE-BUILT SOAK-WELLS

Four soak-wells (1 to 4) were uncovered with stones set in circular form. Soak-wells No. 1, situated in the north eastern corner of the open courtyard ‘I’ was recovered at a depth of 4 feet 2 inches. Excluding the one foot width of the wall of the soak-well, it measures 2 feet in
diameter internally. In the north-eastern side of room ‘M’, the remains of soak-well No. 2, measuring 14 feet and 5 inches in circumference, were found in a disturbed condition.

Soak-wells 3 and 4, recovered on the western side of the courtyard, were found in juxtaposition. Both these soak-wells have a one foot wide stone-built wall and measure 3½ feet in diameter. The upper courses of the wells were found missing in both cases.

**EARTENWARE JAR SOAK-WELLS**

Along the western wall in room ‘Q’, about 1½ feet apart, the remains of two earthenware jar soak-wells (5 and 6) were uncovered side by side. Wells 5 and 6 contained three and two jars, respectively, placed vertically one above the other. These jars were found perforated at the bottom for the free outlet of water (Pl. VIII-b).

**TERRACOTTAS**

**Human Figurines**

The excavation yielded 26 human figurines all from the last Building Period IV. Period III revealed only a few examples while Periods I and II did not yield any.

This observation is also supported by the previous results of John Marshall’s excavation on the site. In this regard, Marshall makes a very pertinent comment. Most of them (in terracotta) come from the Bhir Mound and Sirkap cities, but it is a curious fact that none were found in the lowest (fourth) stratum of the Bhir Mound and of very few from the third stratum, some are undoubtedly strays from the second, and the rest cannot be dated much earlier than the close of the fourth century B.C. This observation is again supported by Mortimer Wheeler’s excavation at Charsada (Bala Hissar) where the earliest terracottas were of the “Baroque Lady”, type but were found only in layer (22) and upwards. The layer below, i.e., from twenty to fifty did not produce any example. Hence he concludes, “On my dating, this implies that they came in, sometime during the third century B.C. and lasted until the latter part of the 2nd century B.C. of this century they were pre-eminently characteristic, though it may be suspected that Indo-

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1 This date is according to Marshall’s Chronology.
Greek modes began to supersede them after the Bactrian Conquest of the Frontier and the Punjab (by Demetrius II).\(^1\)

From the above statements, it is clear that Sir John Marshall was inclined to trace the influence from the Mauryan Period while Sir Mortimer Wheeler limited the lower horizon to the time of the Indo-Greek conquest, as is implied in the above quotation. The study of this terracotta under report supplemented by the results of the earlier scholars clearly yields a dating that they came in sometime during the 2nd century B.C. and lasted until the latter part of the 1st century B.C.

In all these last two Periods III and IV, hand modelled specimens have been found together with moulded figurines. The cast figurines are from simple moulds and show either a flat or concave back with finger impressions.

Among these human figurines female figures outnumber the male figures. In the female figurines, a few profusely jewelled, were recorded with punctured breasts. The baroque lady type was also recognised.

The different and representative types with catalogue numbers and layers are described below and are illustrated from the materials gathered during the present excavation.

**HUMAN FIGURINES**

*Plate IX-a*

1. Votive relief of female figurine wearing prominent head dress, loop in the ears and necklace around the neck. Pinkish Terracotta<br>BM-266, Layer (4), Period-IV

2. Fragment relief of much worn female bust, recorded with head dress and applied round ears Holding(?) in left hand which is raised below the breast.<br>BM-229, Layer (3), Period-IV.

3. Votive plaque of a female deity in relief, of pinkish red terracotta, profusely jewelled with ear pendant, necklace and armlets. Traces of veil hanging from the top of the head down the back.<br>BM-492, Layer (4), Period-IV.

4. Votive relief of a female standing figurine, wearing a broad necklace around the neck; braided hair falls from the crown

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\(^1\) Charasada, p. 106.
on either side of the head (Moulded).

BM-280, Layer (6), Period-III.

5. Pinkish relief of human figurine (female) recorded with round applied ears and head dress. Clasped hand resting before the chest were noted with a pierced hole for holding some object.

BM-352, Layer (3), Period-IV.

6. Votive relief of a standing figurine holding (?) in left hand which is raised before the breast. Gives the impression of a tightly drawn shirt above the hips and legs. It is reminiscent of a type BM/17 recovered from Bhir Mound during the previous excavation by Marshall (Moulded).

BM-273, Layer (4), Period-IV.

7. Fragment relief of female figurine with prominent round breast, outstretched arms with one hand resting on the waist.

BM-553, Layer (3), Period-IV.


BM-324, Layer (5), Period-IV.

OTHER HUMAN FIGURINES

1. The ‘Kumbhandha’ squatting and holding a bird in the bend of its left arm recalls a type BM/43 recovered from a previous excavation at Bhir Mound (Moulded).

BM-269, Layer (4), Period-IV.

2. Pedestalled lower part of a human figurine showing prominent fall of drapery (Moulded).

BM-267, Layer (4), Period-IV.

3. Lower part of a human figurine wearing a tightly drawn loincloth (Kaupina) in a leg stretched sitting position. Intended to be a toy, as indicated by a transverse hole through the lower part of its body for an axle.

BM-365, Layer (3), Period-IV.

BAROQUE LADY

Previously the type was described as an “archaic” style and Col. D.H. Gordon introduced terms such as Sar Dheri type, Shahri Bahrol type,
Akhtar Dheri type. As these types are not limited to one Dheri so these terms were discarded and the present name was given by Mortimer Wheeler in his Charsada (Bala Hissar) report. He has communicated sixteen characteristic of these figurines. Dr. Dani in his report on Shaikhan Dheri has summed up three main features i.e., (i) the nose is pinched, (ii) the mouth, eyes, breasts and ornaments are applied and (iii) the breasts are punctured while the eyes, waist band, anklets etc., are shown by incised lines.

The figures recovered from the present excavation of Bhir Mound, Taxila are described below:—

Plate X-a

1. Female Figurine (Red terracotta) with pointed short arms slightly damaged. Eyes are formed of round pellets with straight horizontal incision across them. Torques, necklace and applied ear ring are represented by punctured dots.
   BM-576, Layer (4), Period-IV.

2. Female figurine with short pointed arm and round punctured breast. Eyes are depicted by straight horizontal incised line and nose is pinched. Applied Torques and a double band of necklaces are represented by punctured dots.
   BM-588, Layer (4), Period-IV.

3. Miniature buff terracotta female figurine, small stretched arms broken at the end. Pinched nose, applied eyes and neck band. Hair applied, falling on the sides, revealed by incised cuts and holes. Prominent round bust, narrow waist and broad flat thighs end in pointed legs below.
   BM-313, Layer (5), Period-IV.

4. Human figurine with short pointed arms, legs missing. Eyes are depicted by a straight horizontal incised line. Neck band of channa-vira.
   BM-337, Layer (7), Period-III.

5. Miniature female figurine with sharp nose and short arms. Applied eyes and ears and incised, decorated necklace. Eyes
are depicted by straight horizontal incision line (Tricorn head) pin hole for breast (plumed tapering hairs revealed by incised lines).

BM-635, Layer (5), Period-IV.

6. Headless female figurine with short pointed arms, narrow waist and broad thighs tapering to narrow pointed legs. Small applied bust wearing, Champa-vira and traces of ornaments around the neck and on the legs.

BM-456, Layer (5), Period-IV.

ANIMAL AND BIRD FIGURINES

The excavation revealed a large number of animal figurine which are all hand modelled. With the exception of a few recovered from Period III, all comes from Period IV at the top. Among these animal figurines, the horse, elephant, bull, dog, ram and stag were prominently recorded. The horses possessed elaborate head-dress, head-collars and face straps. Their noses are pierced and the eyes have been applied separately. On the arched neck, manes were depicted by indentation and exaggerated lines. The eyes of the elephants were mostly depicted by sunken lozenges. Body fragment of animals (Bull) were noted with solid legs pierced for wheels. Rams and stag heads with twisted and simple horns which seem to be pot-handles were prominently recorded.

The figurine of a bird (probably a duck) was recovered with a transverse hole through body for axle. Almost all these examples have previously been recorded from Bhir Mound.

(a) Bull

1. Hand modelled, headless miniature humped bull a crude specimen.

   BM-286, Layer (7A), Period-III.

2. Headless and legless humped bull.

   BM-338 (Surface).

3. Fragment of humped bull with twisted horned head and sunken lozenge eyes.

   BM-589, Layer (4), Period-IV.
(b) Rams

4. Terracotta toy ram with indented twisted horns, applied indented eyes roundels and pointed mouth.
   BM-610, Layer (4), Period-IV.

5. Terracotta ram with twisted horn, long round narrow mouth, incised roundels for eyes, tail and legs broken.
   BM-102, Layer (5), Period-IV.

(c) Horses

6. Hand modelled figurine of a horse with indented cut for a mane on the arched neck, head collar and head dress. Applied decorative straps around the neck. Eyes indicated by applied roundels with dots.
   BM-514, Layer (4), Period-IV.

   BM-228, Layer (4), Period-IV.

8. Hand-modelled figurine with arched neck, head dress and head-coller, eyes depicted by applied incised roundels.
   BM-45, Layer (3), Period-IV.

9. Hand modelled figurine of a horse. Eyes have been indicated by dots within a sunken diamond. Incised holes for nose, bridle and cut for mouth. Applied and incised dotted straps on the fore-head.
   BM-113, Layer (3A), Period-IV.

(d) Elephants

Terracotta elephants mostly come from the upper level in period IV. Some have riders, some not; some are quite plain while others are provided with trappings and others again are adorned with stamped designs. Some of the specimens are embellished with a variety of small patterned squares or triangles or circles or with lozenges stamped on the surface of the head and trunk.
Most of the elephants are solid throughout but a few of the largest have hollow bodies and legs. The eyes are generally diamond shaped and stamped but sometimes lozenge shaped.

*Plate IX-b*

1. Terracotta buff elephant with trunk and legs broken, ornamental strap on the body and traces of necklace around the neck and with double riders.
   BM-65, Layer (4), Period-IV.

2. Almost similar to 65 with traces of double riders.
   BM-523, Layer (4), Period-IV.

3. Terracotta elephant head, protruding fore-head, diamond eyes prominently raised trunk with damaged tusk.
   BM-193, Layer (4), Period-IV.

4. Terracotta solid elephant with diamond sunken eyes, tusk and raised trunk damaged. The legs are broken.
   BM-321, Layer (4), Period-IV.

(e) *Wheeled Toys*

5. Terracotta humped bull adorned with incised band on the fore-head with solid legs pierced for wheels.
   BM-91, Layer (4), Period-IV.

6. Terracotta horse similar to humped bull 91, with neck and frontal face decoration.
   BM-329, Layer (3) Period-IV.

7. Almost similar to No. 91.
   BM-262, Layer (4), Period-IV.

8. Only hind part with twisted tail and solid leg pierced for wheels.
   BM-14, Layer (3), Period-IV.

(f) *Lugs*

Ram, stag and goats head lugs from pot (2nd B.C.) (Charsada and Bhir Mound).
1. Looped horn and narrow solid pointed mouth ram head-lug. 
   BM-99, Layer (5), Period-IV.

2. Similar to No. 99 with incised holes on the fore-head and cut 
   for mouth. 
   BM-218, Layer (6), Period-III.

3. Goat (?) headed lug with pointed small mouth and horns. 
   BM-204, Layer (5B), Period-IV.

4. Horned stag head lug with solid tapering round mouth. 
   BM-341, Layer (3), Period-IV.

(g) Birds

1. Terracotta headless hollow body (duck or dove) with flat foot 
   base and transverse hole through the body for axle. 
   BM-278, Layer (6), Period-III.

2. Terracotta bird (probably a duck?) with damaged head and 
   tail. A transverse hole through the rounded body for the axle. 
   BM-253, Layer (4), Period-IV.

MISCELLANEOUS TERRACOTTA OBJECTS

Besides terracotta figurines described above, a large number of house 
objects and other finds in terracotta were recovered from Period III 
and IV. It may be repeated that Period I and II yielded no material falling 
in this group. These objects include fragments of votive tanks, discs, 
flesh rubbers and seals (Seven in number). A large number of plates end 
hubbed and spoked terracotta toy cart wheels were also recorded in the 
last Period IV.

I. VOTIVE OR RITUAL TANKS

Previously, Marshall in his report on Taxila, enumerated three main 
types of these tanks, i.e., Round bowl shaped with a number of miniature 
saucer shaped lamps around its rim (2) Square form with four birds and 
corner lamps while the third type is more elaborate and was recorded 
with a small shrine and a primitive-looking idol of a goddess either inside 
or in front of it. His later two types are mainly confined to Sirkap. According 
to him "It is true that they occur very rarely in Bhir Mound, and 
that such as have been found are of a different type from those found in
Sirkap, and it might reasonably be inferred, therefore, that the latter were a novelty introduced by the Parthians.\footnote{1}

Similar examples have been found at other site \textit{e.g.}, Kausambi Hastinapura and Ahichhatra.\footnote{2} At the latter site, their first introduction is dated round 100-200 A.D. They are foreign in origin, attributed to the Parthians and said to be associated with the cult of Mother Goddess.\footnote{3}

From the excavation under report, two fragments of badly mutilated votive or ritual tanks were also recorded. Both these tanks of square shape were recorded with incomplete symbols of cones and loops more akin to Marshall type 2 previously recovered from the Parthian levels at Sirkap.

The following specimens are illustrated below:—

1. Thick walled ill-fired fragment of votive tank with symbols incomplete.
   
   BM-292, Layer (3), Period-IV.

2. Fragment of a votive tank with cone and loop symbol.
   
   BM-357, Layer (3), Period-IV.

\textbf{II. FLESH RUBBER}

3. Flat rectangular of red clay heavily mixed with small stone to make the surface rough. Probably used for the soles of the feet.
   
   BM-227, Layer (5B), Period-IV.

\textbf{III. WHEELS}

Sir Mortimer Wheeler (Charsada, p. 141) has illustrated two examples while Marshall (Taxila, p. 452) has illustrated three specimens two from Bhir Mound and one from Sirkap. Dr. Dani in his report on \textit{Shaikhan Dheri Excavations} has enumerated six varieties. From the excavation under report a large number of wheels, almost all from the last period IV, are classified here under four varieties. All these varieties are illustrated as below:—

\textit{Plate X-b}

\textbf{I. Spoked wheels with hub on one side.}

1. BM-591, Layer (3), Period-IV.

2. BM-27, Layer (3), Period IV.

\footnote{1} Marshall, Taxila, p. 467-68.
\footnote{2} Agrawal (1947-48), p. 178.
\footnote{3} \textit{Ibid.}, p. 125.
II. Thin solid hand-made wheel.

3. Crude workmanship.
   BM-309, Layer (5), Period-IV.

III. Thick solid wheels with hub or collar.

4. Large size.
   BM-38, Layer (3), Period-IV.

5. With a prominent projection.
   BM-465, Layer (3A), Period-IV.

6. Medium size.
   BM-48, Layer (3), Period-IV.

IV. Thick solid wheel with projection on one side.

7. BM-177, Layer (5), Period-IV.

MISCELLANEOUS BONE AND IVORY OBJECT

The excavation yielded a number of bone style awls needles. All these were recovered from periods III and IV with the majority from the later. Another noteworthy find is the handle of a mirror.

The following are selected for illustration:

Plate XI-b

1. Ivory hair pin, round pointed head and band of incised rings below (Fig. 4, 2).
   BM-374, Layer (6), Period -III.

2. Long pointed ivory hair pin or antimony rod, head broken (Fig. 4, 3).
   BM-490, Layer (5), Period-IV.

3. Bone fragment of antimony rod or stylus with the upper end broken (Fig. 4, 8).
   BM-495, Layer (9), Period-II.

4. Tiny ball. (Fig. 4, 5).
   BM-472, Layer (4), Period-IV.
5. Handle of a mirror prepared by turning on the lathe (Fig. 4, 4). BM-534, Layer (8), Period III.

6. Indeterminate one object (Fig. 4, 11). BM-240, Layer (7), Period-III.

BANGLES

A number of shell, glass and copper bangles were recovered mostly from the upper levels. The glass bangle fragments which come from Periods I, II and IV, simple, plain and generally opaque with traces of white chalky coating, were recovered. This may be the result of disintegration of the glass due to atmospheric and sub-soil conditions.

The art of manufacturing objects from shell goes back to pre-historic times. A numbers of bangles and other shell articles have been discovered at many pre-historic sites in the provinces of Sind, Punjab and Baluchistan. It is therefore, evident that the use of shell bangles has been common for thousands of years. Shell bangles which distinctively out-numbered all others, were sawn out of convex conch shells and have an oblique section. Shell has always been regarded sacred among Hindus so that waste fragments were also used as charms. These mainly come from Periods III and IV of the excavations under report.

The selected specimens of shell bangles are described below:—

Plate XI-b

7. Fragment of a shell bangle, somewhat square in section and showing a concavity or saddle due to the structural feature of the conch shell (Fig. 4, 1).

   BM-35, Layer (3), Period-IV.

8. Fragment of a shell bangle, somewhat square in section (Fig. 4, 6).

   BM-129, Layer (6), Period-IV.

9. Almost similar to No. 1 above (Fig. 4, 7).

   BM-506, Layer (4), Period-IV.

10. Fragment of a shell bangle, section as above with incised cross decoration on the exterior (Fig. 4, 10).

    BM-449, Layer (4), Period-IV.
Fig. 4. Bhir Mound. Shell bangles, bone and ivory objects
11. Fragment of a shell bangle, section as before (Fig. 4, 9).  
BM-54, Layer (3A), Period-IV.

STONE OBJECTS

The stone objects recovered from Bhir Mound consisted of querns, pestles (mullers), a whetstone, the fragment of a stone vase and a spherical stone pebble which might have served as a weight. A number of semi-precious stone beads and pendants were also found which are described separately.

I. QUERNS MULLERS

Except the earliest Period I, stone querns and mullers have been found at all levels. Previously, Marshall had recorded: "Strange to say, no quern of this type (Saddle-quern) have been found in Bhir Mound settlement which is anterior to about 200 B.C. The quern then in use was the stool-quern with four legs".¹ Contrary to this statement, however, in the present excavation under report, except three leg fragments of stool querns, all the types recovered were "saddle quern".

The roughly-hewn under surface of these querns suggests that they were fixed to the floor of the house.

The mullers used with these querns are generally between 4 to 11 inch in length and 4½ to 11 inches in diameter. Some are made of quartzite, basalt, horn blend and sand stone. The most common shape seems to have been a long slightly barrel-shaped cylinder. Some, however, were true cylinders, and others were natural pebbles rubbed roughly into shape. The following few examples from among the many found on the site will suffice.

Plate XI-a

1. A fragment of a large saddle quern.  
BM-636, Layer (4), Period-IV.

2. A large sized stone muller, cylindrical in shape with rounded ends.  
BM-556, Layer (4), Period-IV.

3. A small sized stone fragment almost similar to No. 1 above.  
BM-70, Layer (4), Period-IV.

4. A small sized muller.
   BM-605, Layer (4), Period-IV.

5. A muller of natural stone with a broken end.
   BM-604, Layer (14), Period-I.

6. A stone muller, almost rectangular in section, with wide smooth sides.
   BM-245, Layer (5B), Period-IV.

7. A long flattened muller with broken ends.
   BM-296, Layer (4), Period-IV.

II. WEIGHTS

A uniform system of weights at Taxila has been dealt with in detail by Marshall. As with earlier examples, these weights are invariably made of hard stone granite, horn blend-gneiss and are spherical in shape. Why a spherical weight should have been preferred to others, is not apparent, since it is not a convenient shape when the weights are piled in the scales. It is possible that they may not be weights, since they could as well be used as sling balls or hammer stones.

1. Circular spheroid.
   BM-561, Layer (10), Period-II.

2. Circular with flat ends.
   BM-10, Layer (2), Period-IV.

3. Discular spheroid. The flat side retain the original surface.
   BM-257, Layer (4), Period-IV.

   BM-422, Layer (3), Period-IV.

5. A leg fragment of a red stone stool quern.
   BM-585, Layer (5), Period-IV.

6. A leg fragment of a sand stone stool quern.
   BM-31, Layer (3), Period-IV.

III. WHETSTONE

7. A specimen of a whetstone for sharpening tools was prominent.
A fragment of a whetstone has several pits (deep grooves) made after sharpening tools on three sides. 

BM-330, Layer (3), Period-IV.

**METAL OBJECTS**

Besides indeterminate bits of iron, copper and bronze, small pieces of (fashioned) or fabricated objects in these metals were found in large numbers in almost all strata. Their fragmentary condition, however, reduces their practical value. The objects found in the present excavations are naturally more limited in range than those found in previous excavations and now exhibited in the Archaeological Museum at Taxila. Only a few of the objects described below can claim special interest. It is worth noting that copper and bronze objects are far fewer in number than iron objects.

**IRON OBJECTS**

After terracotta, iron forms the principal material among these antiquities and has been found at all the levels in the excavation. Mostly, however, these come from the upper levels, *i.e.*, Periods III and IV while Period I and II yielded a markedly lower number of objects. They were all heavily oxidised and many of the fragments are difficult to identify. Most of the materials are articles of house-hold use or otherwise are wood fittings and include various types of nails, door-knobs clamp hooks, carpenter’s tools, rings and ring-holds, rods.

Large and small sized heaps of iron slag recovered from different levels indicate that the iron objects of various kind were produced locally.

**NAILS AND RODS**

By far the greatest number of iron objects consists of nails and the upper level, *i.e.*, Periods III and IV yielded the maximum quantity. It appears that apart from door fitting, iron nails might have also been used in fixing roof battens. Here, only representative type of nails are selected for illustration.

**NAILS**

*Plate XII-b*

5. Punch with broken lower tip (Fig. 5, 1). 

BM-114, Layer (5), Period-IV.
Fig. 5. Bhir Mound. Iron nails and miscellaneous iron objects
4. Flat headed fragment of nail rectangular in section, tip broken (Fig. 5, 2).
   BM-67, Layer (4), Period-IV.

3. Fragment of a nail, of round section, circular head broken, (Fig. 5, 3).
   BM-594, Layer (5), Period-IV.

2. Complete iron nail, round in section and with knobbed head. (Fig. 5, 4).
   BM-418, Layer (3), Period-IV.

8. Nail with bent head and point, square in section (Fig. 5, 6).
   BM-51, Layer (3), Period-IV.

6. Fragment of a nail, round damaged section and head (Fig. 5, 8).
   BM-231, Layer (5B), Period-IV.

9. Triangular head fragment of nail, rectangular in section (Fig. 5, 13).
   BM-21, Layer (3A), Period-IV.

ROD

Plate XII-b

1. Rod of a round section, with flattened end (Fig. 5, 5).
   BM-582, Layer (4), Period-IV.

KEY

Plate XII-b

7. Iron key pronged (?) end (Fig. 5, 7).
   BM-306, Layer (6), Period-III.

RING HOLDS

Rings made of iron sheet have also been found in Period IV. They could have served as holds for joints in wood or for supporting the wooden end of a handle.
RING

Plate XII-b

10. Ring fastener with broken ends, possibly used for binding (Fig. 5, 9).
   BM-53, Layer (3), Period-IV.

CLAMP

Plate XII-b

14. Fragment of a clamp with both ends bent downwards. One end broken (Fig 5, 11).
   BM-157, Layer (4), Period-IV.

KNIVES

Plate XII-b

11. Fragment of small knife blade (Fig. 5, 12).
   BM-243, Layer (6), Period-III.

15. Fragment of a large knife blade (Fig. 5, 14).
   BM-221, Layer (5B), Period-IV.

ADZE

Plate XII-b

13. Fragment of iron adze, square in section, with broader end, top broken (Fig. 5, 15).
   BM-2, Layer (3), Period-IV.

CHISEL

Plate XII-b

12. Fragment of an iron chisel, rectangular in section with sharpened ends (Fig. 5, 10).
   BM-437, Layer (4), Period-IV.

STAPLES AND DOOR RINGS

Staples made of bent wire or flattened iron sheet were recovered from Period III and IV. These are driven into the door panel and bent
side ways to hold the hook or ring. The following are described and illustrated.

*Plate XII-a*

1. Almost circular looped head of double shanked staple, ends missing (Fig. 6, 3).
   BM-123, Layer (5), Period-IV.

2. Complete staple, with double shank, rectangular in section looped head with missing end (Fig. 6, 4).
   BM-150, Layer (6), Period-III.

3. Staple head of flattened iron, rectangular in section. The shank, which seems to be double, is missing (Fig. 6, 9).
   BM-452, Layer (4), Period-IV.

**DECAPITATOR OR KALPI**

4. A wide piece of iron with the upper end curved and pointed, resembles the modern, Kalpi. It is fixed to a long bamboo and used by shepherds for cutting down tree branches to obtain cattle feed. Its presence in the Bhir Mound Period III points to the fact that sheep, goats and cattle were raised at Taxila. (Fig. 6, 2).
   BM-181, Layer (6), Period-III.

**HOOKS**

Among the hooks the following specimens are selected for illustration:

*Plate XII-a*

5. Hooks with circular head having rectangular perforation single shank, heavily encrusted (Fig. 6, 5).
   BM-127, Layer (6), Period-III.

6. Fragment of hook (or bangle) square in section (Fig. 6, 8).
   BM-374, Layer (6A), Period-III.

*Plate XII-a*

7. Fragment of hook (or bangle) square in section (Fig. 6, 6).
   BM-53, Layer (3), Period-IV.
8. Fragment of hook (probably a fish hook) (Fig. 6, 7). 
   BM-223, Layer (5B), Period-IV.

9. Fragment of hook (probably a fish hook), (Fig. 6, 1).
   BM-80, Layer (3A), Period-IV.

**BANGLE**

*Plate XII-a*

10. Iron bangle or ring, with rectangular hammered sides (Fig. 6, 10).
    BM-49, Layer (3), Period-IV.

**II. COPPER AND BRONZE**

The lower levels, *i.e.*, Periods I and II did not produce any copper or bronze objects. In the present excavations, it may be due to the limited area in which the diggings in these early levels were carried out. The use of the metals was rare in period III but they were abundantly recovered in Period IV at the top.

In the whole collection, a loop headed pin, (Fig. 7, 2) (Plate XIII-b, 9) owing to its wide chronological and spatial distribution, deserves special attention. It has remained a subject of heated discussion among scholars. An illuminating commentary\(^1\) has been given by Stuart Piggot on the two examples known from the Indus civilization, West Pakistan. Of these two, one from Moenjodaro\(^2\) consisting of a single head is most interesting for us, as it gives the earliest clue to the use of these pins in this part of the country. It has often been pointed out that the very rarity of these pins emphasises their intrusive nature, but with the increase in number, the weight of evidence may be shifting to the other conclusion. Similar examples, with a single coil or an incipient spiral made by twisting the flat end of the rod, have lately been recorded from Swat\(^3\) and from Timargarha and Balambut in Dir.\(^4\) The example from the Balambat excavations was found in a rather later context, associated with the last building phase.\(^5\) Whatever their implication, the new finds have broadened orbit of distribution from the lower Indus valley upto Dir and Swat. The find under study however is more akin to those found in

---

Dir and Swat States where as many as six specimens were recorded.
The selected specimens are described below.

**ANTIMONY RODS OR KOHL-STICKS**

Only one type, *i.e.*, plain rod with rounded ends was recovered.

**PLAIN ROD**

*Plate XIII-b*

8. Rod of thin wire with rounded ends (Fig. 7, 1).
   BM-217, Layer (7), Period-III.

2. Long rod, round in section with rounded ends (Fig. 7, 9).
   BM-625, Layer (3), Period-IV.

6. Rod with one end round and the other broken (Fig. 7, 7).
   BM-546, Layer (4), Period-IV.

**NAIL PARSER**

*Plate XIII-b*

7. Nail parer, round in section, with pointed and flattened projected ends (Fig. 7, 6).
   BM-28, Layer (3), Period-IV.

4. Small nail parer, hammered rectangular section, with one side flattened which projects at the end (Fig. 7, 11).
   BM-215, Layer (3), Period-IV.

**NEEDLE**

*Plate XIII-b*

13. Long needle of round section with missing eye and pointed end (Fig. 7, 15).
   BM-641, Layer (4), Period-IV.

5. Copper wire round section with both ends pointed (Fig. 7, 5).
   BM-239, Layer (6), Period-III.

**PIN**

*Plate XIII-b*

9. Copper pin round in section with one end twisted to form a ring or an incipient spiral, and the other pointed. Apparently it was hammered out of a round wire, length: 3.6 inch (Fig. 7, 2).
   BM-412, Layer (3), Period-IV.
BANGLE

*Plate XIII-b*

1. Hollow bangle (?) fragment (Fig. 7, 14).
   BM-548, Layer (9), Period-II.

14. Solid bangle (?) fragment (Fig. 7, 8).
   BM-189, Layer (5), Period-IV.

BLOW PIPE

*Plate XIII-b*

10. Fragmentary blow pipe of beaten copper. It is of a type still used, particularly for soldering, by goldsmiths in Pakistan (Fig. 7, 3).
   BM-425, Layer (3), Period-IV.

12. Almost similar to above No. 11 (Fig. 7, 4).
   BM-622, Layer (5), Period-IV.

MISCELLANEOUS OBJECTS

*Plate XIII-b*

15. Fragmentary object, appears to be the handle of a pot (Fig. 7, 16).
   BM-130, Layer (5), Period-IV.

16. Object of indeterminate use (probably a latch) of round section, flattened and perforated at one end (Fig. 7, 17).
   BM-619, Layer (4), Period-IV.

18. Copper sheet strap fragment (Fig. 7, 10).
   BM-20, Layer (3), Period-IV.

11. Spike (?) of somewhat square section (Fig. 7, 13).
   BM-251, Layer (4), Period-IV.

3. Object of indeterminate use (Probably a nail parer) (Fig. 7, 12).
   BM-60, Layer (3), Period-IV.

III. LEAD

Only two lead objects were recovered from the present excavation. Each of these came from a different level in Period III and IV. A spool types, possibly used for distending the ear-lobe, was distinctive. The
practice of distending the ear lobe is still continued in South India by
the lower castes. A specimen is described below:—

Plate XIII-b

17. Coiled strip, probably used for the preparation of the spool.
This strip is hammered to a channelled section and is closely
wound.

BM-464, Layer (8), Period-III.

BEADS AND PENDANTS

The beads and pendants found in previous excavations in Bhir
Mound and other sites at Taxila, have been widely dealt with by H. Beck
in his Beads from Taxila. The current excavation under report, limited
as it was to a single cutting, yielded a total of sixty two beads and three
pendants. Stone alone accounts for thirty five of them. The periodwise
distribution of the beads is as follows: Period I, two; Period II, six;
Period III, nine; Period IV, forty seven including an unstratified one.
The presence of a few unfinished specimens, indicate that beads were
manufactured locally.

The materials used for the manufacture of these beads include,
semi-precious stones such as quartz, cornelian, agate. Other materials,
include terracotta, shell, glass, bone and ivory. From the appended
table (p. 58), it will be seen that semi-precious stones alone account for 54.8
per cent of the total yield with cornelian claiming 43.0 per cent. Quartz,
agate and kanjur seem to have been sparingly employed. Amongst the
remaining materials, terracotta follows the stone beads while glass,
shell and bone show a sizable percentage. Apart from the prime favourites,
cornelian and terracotta, no other material was represented in all the
periods, although this phenomenon, in view of the restricted nature of
the excavation, should not be emphasized.

The shapes represented in stone, glass, shell, bone and ivory include
spherical, barrel, cylindrical, bicone, circular, along, short, standard,
disc, round and faceted beads. In the terracotta beads a large number
of plain and incisedly decorated conical and biconical beads, gadrooned,
smooth tyred, cogged, collared and centrally ridged beads were recorded.

1 Edger Thurston, Castes and Tribes of southern India, Madras 1909.
2 Memoirs of the Archaeological Survey of India, No. 65 (1941). The method of classification of shapes
followed here is that of Beck. See also his "Classification and nomenclature of beads and pendants" Archae-
ologia, LXXVII (1928), and Ancient India, No. 2, (1946) p. 97, n. 2.
Fig. 8. Bhir Mound. Stone beads and miscellaneous stone objects.
Some of these principal shapes have been further divided into sub-varieties on the basis of their length and transverse section.

The materials together with the range of shapes are dealt with below in order of frequency.

Cornelian accounts for the largest number (Twenty eight and is found in Periods II to IV, three from Period II, two from Period III and twenty three from Period IV). A common shape in this material is the spherical.

Agate was next in order of frequency amongst the semi-precious stones and was represented by four beads, of which one each came from Period I and Period III while the remaining two were recovered from Period IV.

Quartz accounts for two beads, both from Period IV. The shapes represented are long, convex, hexagonal (Fig. 8, 2, Plate XIV.a,1) and biconical long, barrel, circular (Fig. 8, 20, Plate XIV.a,4).

A single specimen of Kanjur of long barrel type was recorded from Period IV (Fig. 8, 1, Plate XIV.a,3).

Shell formed the material for four beads, distributed as follows: Period III, three and Period IV, one. The common representative shape is short, cylindrical, circular.

Class beads number five, of which two came from Period II and the remaining three from Period IV. They are of opaque banded variegated and green-blue in colour. The collection includes iridescent white standard bicone truncated ridged bead from Period II and spheroid type from Period IV.

A solitary example of bone and ivory beads from Periods II and IV respectively were of the spheroid type.

Terracotta accounted for seventeen beads, one each from Periods, I, II and III and thirteen from Period IV. The shapes represented in this class are as follows:—

(i) Biconical, plain truncated.
(ii) Biconical, with centrally notched band.
Fig. 9. Bhir Mound. Terracotta beads
(iii) Asymmetrical bee-hive shaped.
(iv) Gadrooned.
(v) Collared.
(vi) Sloping flat side.

The following beads are illustrated:

1. Plain biconical centrally ridged large bead (Fig. 9, 1).
   BM-467, Layer (8A), Period-III.

2. Bicone circular wheel type (large) (Fig. 9, 10).
   BM-176, Layer (6), Period-III.

3. Bicone circular wheel type (Medium), (Fig. 9, 3).
   BM-566, Layer (9), Period-II.

4. Large bead, flat base collared sides or ghata shaped, (Fig. 9, 11).
   BM-77, Layer (4), Period-IV.

5. Similar to BM-77 of small size (Fig. 9, 12).
   BM-596A, Layer (4), Period-IV.

6. Similar to No. 77 and 596 of well fired clay but of smaller size,
   (Fig. 9, 13).
   BM-88, Layer (3), Period-IV.

7. Biconical with centrally notched band and concave cones
   (Fig. 9, 2).
   BM-654, Layer (4), Period-IV.

8. Biconical with centrally notched band and round junction of the
   cones (Fig. 9, 4).
   BM-140, Layer (5), Period-IV.

9. Biconical centrally gadrooned, or straited and concave cones
   (Fig. 9, 7).
   BM-572, Layer (3), Period-IV.

10. Conical, gadrooned (Fig. 9, 5).
    BM-61, Layer (3), Period-IV.
11. Biconical, with central pin hole dots and straited cones (Fig. 9, 6). BM-492, Layer (1), Period-IV.

TERRACOTTA BUTTONS

1. Unfinished button without perforation (Fig. 9, 9). BM-596B, Layer (4), Period-IV.

2. Button with double perforation (Fig. 9, 8). BM-304, Layer (6), Period III.

**TABLE I**

PERIOD-WISE DISTRIBUTION OF BEADS CLASSIFIED ACCORDING TO MATERIAL

<table>
<thead>
<tr>
<th>Material Semi-precious stone</th>
<th>Period I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>Unstratified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornelian</td>
<td></td>
<td>3</td>
<td>2</td>
<td>23</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Agate</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Quartz</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Kanjur</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Shell</td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Glass</td>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Bone</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Ivory</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Terracotta</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>13</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>47</td>
<td>1</td>
<td>65</td>
</tr>
</tbody>
</table>

COINS

Ten coins were obtained from the excavation, in addition to two picked up on the surface. Out of the total of twelve, only six were in a fair state of preservation permitting identification. The rest had either
considerably disintegrated or, even if the metallic core was holding together, the symbols on them had been completely defaced.

All these come from the upper layers (3A), (4) and (5) belonging to the last Building Period IV. These coins except one in silver gilt, were of copper. Except for two rectangular shaped, the rest were circular.

In the decipherable coins, three circular copper coins were recorded with an impression of animals (Lion ?). One of these bears the swastika above the animals impression. Two comparatively small circular shaped copper coins bore punched mark symbols including ‘crescent-on-hill’, occasionally combined with a taurine figure or Nandipada or something like this.

All these coins recovered from the top levels of the last Building Period IV appear to be local Taxila currency.

Below are described the more legible of the coins:—

Plate XIII.a

1. Obv: Lion to I, incuse; indistinct object in front, swastika above.
   Rev: Defaced blank.
   Metal: copper; Shape; round; Condition; good.
   BM-624, Layer (4), Period-IV.

2. Almost similar to No. 1 with indistinct traces of the swastika above.
   Metal: copper; Shape; almost round; Condition; fair.
   BM-56, Layer (4), Period-IV.

3. Obv: Three arched ‘chaitya or hill’ surmounted by crescent.
   Rev: Indistinct (may be a large taurine ?).
   Metal: copper; Shape; round; Condition; good.
   BM-16, Layer (3), Period-IV.

4. Obv: Three arched ‘chaitya or hill’ surmounted by a crescent with traces of ‘taurine or Nandipada’.
   Rev: Almost same as obverse.
Metal: copper; Shape: round; Condition: good.
BM-639, Layer (5), Period-IV.

As regards the dating of these punched marked and uninscribed coins, much controversy is still going on among such scholars as A. Dani, P. L. Gupta, S. C. Roy and F. R. Alchin. The latter consider the origin of these coins to be in the Mauryan period while Dr. A. Dani, in the chronological context at Bhir Mound, places them in the post-Mauryan period. In this respect, even the views of Marshall about such coins are controversial and contradictory. In his three volumes on Taxila he writes, "It would be unsafe, therefore, to infer that any of these local coins of Taxila were struck before the 3rd century B.C. but from that time on, until the coming of Greeks, and perhaps for sometime afterwards, they must, to judge by the numbers recovered, have been issued in abundance. Dr. Allan (B. M. Cat. P. CXXXIX) says that this coinage was seemingly a short lived one, beginning late in the 3rd century B.C. under Mauryan governors and ending with the Greek conquest before the middle of the second century B.C." But in another place Marshall writes as follows: "To this period of independence (C. 225-183 B.C.) are probably to be ascribed the rare copper coins as well, though the simpler types of the latter appear to date from as far back as the Mauryan Period, and others may not have been issued until after the advent of the Greeks." On referring to the Stratigraphical chart of local Taxilan coins from Bhir Mound and Sirkap (pp. 76-61) published by Marshall, two types i.e., No. I and 20 were prominently noticed in the present, excavation under report.

Previously, type 1, i.e., 'arched Chaitya or hill' surmounted by crescent, was found through all the levels of Sirkap while type 20 was confined to the Scytho-parthian level. In the present excavations under report, both these types were recovered from the last Period IV at Bhir Mound. As mentioned earlier, there is clear and abundant evidence which disclosed a noticeable overlap between the last two periods at Bhir Mound and the early levels of Sirkap. On the basis of these accumulating evidence these punched marked and uninscribed coins can safely be placed in the 1st century B.C.

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1 A Dani.
2 P. L. Gupta.
5 Marshall, Taxila, 756.
a. Katnerpara excavation, East Pakistan. Exposed structural remains

b. Katnerpara excavation, Exposed portion of a wall
a. Sitakot excavation, East Pakistan. Deep digging showing superimposed construction

b. Sitakot excavation. Partially exposed remains of a monastic cell
Bhir Mound, Taxila. Panoramic view of the excavation site with the Sarda Hills in the background.
a. Bhir Mound. Early occupation levels showing pillar remains of Periods I and II

b. Bhir Mound. Occupation levels of Periods II and III
a. Bhir Mound. A trench showing soak-well and drains in Period IV

b. Bhir Mound. An occupation level with a fireplace in Period III
Bhir Mound. General view of excavations showing structural remains of Period IV
a. Bhir Mound. Close up view of the soak-well and drains of Period IV

b. Bhir Mound. Storage jar with decoration in relief round the shoulder
a. Bhir Mound. Terracotta human figurines

b. Bhir Mound. Terracotta elephants and wheeled toys
a. Bhir Mound. Terracotta baroque lady types

b. Bhir Mound. Terracotta toy wheels
a. Bhir Mound. Stone querns and mullers

b. Bhir Mound. Bone, ivory and shell objects
a. Bhir Mound. Iron objects

b. Bhir Mound. Iron nails and rods
a. Bhir Mound. Coins

b. Bhir Mound. Copper, bronze and lead objects
a. Bhir Mound. Stone beads and pendants

b. Bhir Mound. Red-ware bowls of Periods II-IV
a. Bhir Mound. Decorative ware

b. Bhir Mound. Red-ware of Periods III-IV
Fig. 1

Sarai Khola excavation, Taxila. Human skeletal remains
Fig. 2

Sarai Kholo. Human skeletal remains
Fig. 3

Sarai Khola. Human skeletal remains
Fig. 4

Sarai Khola. Human skeletal remains
Fig. 5

Sarai Khola. Human skeletal remains
POTTERY

The number of vessels and sherds recovered from the main trench which has been dug down to the natural soil is large. But the study under report deals only with the main types, which, by reason of their outstanding characteristics, mark the main changes in the pottery sequence of Bhir Mound. From top to bottom, they are wheel-made in which both slow and fast wheel-turned sherds (with a few hand-made pieces) were recorded.

The excavation in deep levels, confined to a markedly small area, yielded only a few varying types, i.e., dishes with incurved or straight sides; bowls with straight, convex, corrugated or tapering sides; water vessels and vases etc. In the upper levels a large number of vessels of varying types was recorded.

Overlaps of pottery types from one stratum to another are sufficient to suggest a continuous occupation of the site. Each stratum is, however, distinguished by individual features, and over a prolonged period we find a broad change which extends not only to the shapes of vessels but also to their manufacturing technique and material. Such a broad change divides the types under review into four main distinctive groups, each of which presents a good deal of individuality and forms a characteristic adjunct to the corresponding period to which it belongs. Apart from the dull red ware which continues from bottom to top, three categories viz., N.B.P. ware, black ware and grey ware, being of special importance, have been dealt with separately. The broad features of each group are enumerated here.

NORTHERN BLACK POLISH WARE*

The most distinctive of all the ware at Bhir Mound is the N.B.P. The excavations carried out in a limited area, particularly in the lower horizon, yielded a few sherds from the deepest level. The ware, invariably potted on a fast wheel, is usually thin and has a polished surface having almost a lustrous metallic finish of black colour. The paste is consistently fine and well levigated and contains very little tempering material. The core is usually grey but tends to be reddish in some cases where, below the thin film of shining black, a mat red surface is seen.

*Dr. Nazimuddin Ahmad, "N.B.P. wares from Taxila", Pakistan Archaeology No. 3, 1966. Dr. Ahmad has carried out detailed study of this ware and the present writer is much indebted to him for the help he has taken from these studies.
It has already been well described in detail in earlier issues of "Ancient India" and need not be repeated here.

Previously, Marshall found some sherds and traced the origin of this ware to the Greeks, but whether it was imported or made at Taxila is uncertain. Marshall's analysis of the colourless varnish made of salt-petre and soda remains controversial and for that reason is not acceptable. Gordon observes, "it is unfortunate that we are committed to a name which is an incorrect description of the ceramic to which it has been attached. This is not in fact a polished ware at all, it is a gloss ware that is neither polished nor burnished." Like Marshall, he fancied a family resemblance of this ware with the classical Greek.

Sir Mortimer Wheeler contradicting the above description of Gordon states that "N.B.P. Ware has been mistaken for the Greek black gloss, but as Miss M. Bimson of the British Museum Laboratory points out, there are differences. Thus, a razor blade will run smoothly across the Greek black, whereas it will cut into the India black. If very small fragments are held near a magnet Greek black is attracted to the magnet, whereas Indian black is relatively non-magnetic. Greek black when refired, is consistently stable at temperatures of 1,000°C. Whereas Indian black shows considerable variation in its resistance to such temperatures."

About the surface layer, although its precise nature still remains to be determined, it could be inferred "that the unfired pots were dipped in a suspension of ferruginous inorganic material, probably resembling a red earth and that, after firing to a temperature of C. 800°C, the kiln was sealed so that the pots cooled in a reducing atmosphere."

Contrary to the use of paint and varnish for this ware, Prof. Codrington with reference to the excavation at Bhita holds to the use of 'glaze'. Recent spectrographic analysis by Dr. F. R. Allchin and R. D. G. Faudree have proved that it contains traces of lead, an important and

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1 Ancient India, No. 1, pp. 55-58, ibid., Nos. 10 and 11 (1954-55), pp. 50-52.
2 Marshall, p. 432. Taxila ii. N.B.P. came mostly from BM appeared to be as early as the 4th century B.C.
6 According to the analysis of the Archaeological chemist in India, "the lustre on the surface of the ware appears to be composed of some easily fusible material, possibly of organic origin, which undergoes incipient fusion at a low heat" Indian Archaeology 1955-56, pp. 56-57.
7 Prof. K. de B. Codrington in 'Man', in 1929 No. 101, p. 136-37.
significant fact which distinguishes it from Greek or other western ware of this kind.

From the above it is apparent that the process of manufacture, and the name attributed to this polish, are both controversial and for that reason the name may not be entirely accurate. In the present position of uncertainty, however, a plea is made to retain the established name "Northern Black Polished Ware" even though it may be an incorrect description.

As regards the distribution of this ware, recorded from a large number of explored and excavated sites, it has been found spreading from Charssada near Peshawar and Udegram in Swat in the north to Amaravati and Chebrolu (Krishna District) in the south. In the west it has been found at Nasik and Prabhas-Patan on the Kathiawar littoral. Eastward, it occurs at Tumluk and Tildah in Madnapur district, at Bamgarh in Dinajpur District, Chandra Ketugarh in 24 Paraganas, Mahastangarh in Bogra district and Gaur in Maldah district. It has also been found at Ujjain and Maheswar, Ter and Brahmuni in the Deccan, Kaundanpur (ancient Kaundinyapura) Eran and Tripuri in the central part of India. The present day distribution of the ware somewhat belies the epithet—northern.

The chronological and stratigraphical evidence in respect of this ware from other excavated sites such as Hastinapura and Kausambi in the Ganga Jamuna basins were placed in the early sixth century B.C.¹ The validity of this date has, however, been disputed by some archaeologists who instead prefer a date somewhere in the fifth century B.C.² It is relevant to add that the recent C. 14 dates from the N.B.P. ware horizons at Rajgir, Hastinapur, Kausambi, Ahichhatra, Atranjikhera, Rajghat, Hetimpur, Rupar and Besnagar³ have also not indicated any date for this ware prior to circa 500 B.C. By about the second century B.C., the ware seems to have passed out of active use as shown

by the coins of the corresponding period in the over-lying levels at Hastina-
pura and Vaisali. At Kausambi\(^1\) and Hetimpur, however, a somewhat
longer duration is suggested. Its occurrence in later levels, admittedly
in very small numbers, along with the rouletted ware at Sisupalgarh\(^2\)
and in the shape of caskets at Chandraketugarh\(^3\) only, indicates chance
survival as a treasured fabrics or imitation, possibly in relatively baser
fabric. The ware had its roots in the formative period and is traced
wherever the Mauryan influence was felt. Thus, its extensions in the
peripheral areas in western, eastern and southern India may perhaps
coincide with the expansion of the organized Mauryan Empire and the
developed urbanity of the northern plains. So, the study of this ware
at other comparable excavated sites helps in assigning a relative date
preceding the 2nd century B.C. at Bir Mound Taxila.

Previously, at Taxila, out of twenty sherds eighteen were recovered
from the Bhir Mound during excavations by Marshall. Of the eighteen
sherds, the larger number appear to have come from 7-13 ft., below the
surface, only two fragments being higher than a depth of 7 ft., (one
at 4-10° and another at 6-2°). In the light of the earlier results achieved by
Marshall and Wheeler, particularly in the form of two hoards,\(^4\) the
occupation level at the average depth of 6 ft., below the surface is dated
approximately to 300 B.C., prior to which date the majority of the sherds
must be placed.

During the current excavations at Bhir Mound, apart from one or
two stray fragments, almost all the N.B.P. sherds come from Period I,
the earliest level, i.e., layer (13) to (15) right above the natural soil. Though
the number of sherds is admittedly too small to build a chronological
structure yet it is clear that these are of pre-Mauryan level at the site.
So, in the general sequence, they can be ascribed to circa 4th-3rd century
B.C.

Regarding shapes, very few sherds were helpful. They are too
fragmentary to give any idea of the shapes of the pot of which they
formed a part. Even in pieces, there is no variety, as these are edge pieces
of a rimless bowl, a shape well known in this fabric.

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\(^2\) Ancient India, No. 5, (1949), p. 68 and 79.
\(^3\) Indian Archaeology, 1961-62 p. 63.
\(^4\) Ancient India No. I, p. 27.
The following is a list of the illustrated examples.

**FIG. — 11 (N.B.P. WARE)**

20. Fragment of a bowl with featureless rim. (14)
21. Fragment of a vase with internally grooved sides. (14)
22. Fragment of a bowl with featureless rim. (14)
23. Fragment of a bowl with internally sharpened rim. (13)
24. Fragment of a bowl weakly grooved vertical internally sharpened rim. (13)
25. Fragment of a weakly grooved bowl with vertical featureless rim. (9)
26. Bowl or a cup with vertical featureless rim. (7)

**POTTERY OF PERIOD—I**

The lowest levels of Bhir Mound, representing an average thickness of 3½ ft., immediately above the natural soil, yielded sherds of red ware, black and grey ware and N.B.P. ware. All the specimens were plain except a few showing a decoration of mat and basket mark impressed designs. The black and grey ware formed a homogenous group belonging to a well defined industry. The black and grey colour was as a result of inverted firing. The distinctive feature of this ware is the good quality of the paste formed of well levigated clay. The fabric is so distinctive that it is the safest criterion to distinguish it from the crude forms to which it degenerated later. The types represented are mainly, dishes with incurved or straight sides; bowls with straight, convex, corrugated or tapering sides; water vessels and vases.

The representative series are detailed below:

**FIG.—10 (RED WARE OF PERIOD—I)**

1. Fragment of a smooth surface light red ware vessel with out-turned rim (14).
2. Fragment of a vessel of buff-red ware with a thickened almost flat topped rim (14).
3. Fragment of a vase of dull red ware with almost vertical flat topped rim and soot marked body (14). 3-a almost similar as above of plain dull red ware (14).
Fig. 10. Bhir Mound. Red ware of Period I
4. Fragment of a vessel with out-turned thickened rim of dull red ware (14).

5. Fragment of a vessel with a distinctive out-turned rim. It is of buff-red ware treated with a red wash (13).

6. Fragment of a ‘Ghara’ or water vessel with externally thickened grooved rim. It is of buff-red ware treated with a red wash of coarse gritty surface (13).

7. Fragment of a large bowl of dull red ware with an externally thickened, weakly grooved rim of coarse fabric. It is devoid of any slip or wash. With its variants is occasionally found through all the levels of the site (15).

8. Fragment of a vessel with a thick out-turned rim. It is of light red ware (14).

9. Fragment of a vase with a thick out-turned rim and a cordon around the neck. It is of buff-red ware (13).

10. Fragment of a ‘Ghara’ or water vessel with an out-turned thickened rim and a short narrow neck of light red ware (13).

11. Fragment of a vase of light red ware with slightly out-turned externally thickened rim and a concave neck. It is of medium fabric (15).

12. Fragment of a vase with an out-turned thickened rim and concave neck. It is of coarse buff-red ware treated externally with a red wash (14).

13. Convex base fragment of light red ware (14).

**FIG. 11 (GREY AND BLACK WARE OF PERIOD—I)**

1. Externally grooved bowl of black-grey ware with an incurved featureless rim (13).

2. Fragment of a bowl with incurved internally sharpened rim of indifferently fired grey-black ware (15).

3. Fragment of a basin or bowl of black-grey ware with a vertical internally thickened flat topped rim (14).


5. Fragment of a bowl with slightly incurved featureless rim of dull grey ware (14).
Fig. 11. Bhir Mound. Grey, black and northern black polished ware
6. Fragment of a bowl of black-grey ware with an incurved featureless rim (15).
7. Fragment of a bowl of grey ware with vertical featureless rim (14).
8. Fragment of a bowl of grey ware with slightly incurved side; vertical featureless rim (14).
9. Weakly cordoned fragment of a bowl with vertical featureless rim. It is grey ware treated with a slip (14).
10. Vase of grey ware with a splayed out rim, short concave neck of distinctive grey fabric, it is treated with a slip both internally and externally (14).
11. Fragment of a grey ware vase with out-curved rim (14).
12. Body fragment of a indifferently fired grey ware with externally corrugated sides (14).
13. Fragment of a black ware bowl with a vertical internally sharpened rim (14).
15. Fragment of a bowl with internally sharpened rim of dull grey ware (15).
16. Fragment of a bowl, externally grooved or cordoned shoulder with almost vertical featureless rim of grey ware treated with a black slip (14).
17. Fragment of a grey ware bowl with externally grooved featureless rim (14).
18. A miniature vase of ill-fired grey ware with clubbed or expanded rim (15).
19. Convex base fragment of grey ware (15).

Pottery of Period—II

In Period II (Figs. 12 to 14), new types of plain pottery were introduced along with pottery with impressed designs. Period II is characterised by the introduction of bowl-cum-lid (Fig. 12 No. 5) vessel with footed base (Fig. 13, No. 10a); bowl with plain and corrugated sides; dishes with straight, incurved and hammer head rims; basins, fragment of dish internally decorated with a row of depressed circlets and high bottle neck vessel (Fig. 14, No. 11).
Fig. 12. Bhir Mound. Red ware of Period II
Apart from the new types of plain ware and decorated wares, introduced during Period II, some types of Period I continued in Period II, either in exactly similar forms or with slight variation.

The following were selected:

**FIG. 12 (RED WARE OF PERIOD—II)**

1. Fragment of Basin or Bowl with thickened flat topped rim. It is of dull red or buff red ware (10) No. 1-a is a variant with externally grooved sides (9) No. 1-b variant of above with externally grooved round collared obliquely cut rim (9). Found through all the levels of Periods II and III.

2. Fragment of a internally grooved bowl of dull red ware with vertical featureless rim (9).

3. Fragment of bowl or dish of buff-red ware, slightly incurved rim with grooved exterior (9).

4. Fragment of bowl with almost vertical featureless sharpened rim and round base (11). It is of red or buff-red ware invariably treated with a slip on the both internal and external side. Variant 4-a with an internal ridge (9) while 4-b was recorded with two grooves on the exterior (9) 4-c. With slightly incurved rim and flattish base (10) B.M.-573, (Plate XIV. b, 5).

5. Fragment of Bowl-cum-lid of red ware with folded rim internally under-cut and a flat base. Of medium fabric, it is treated with a wash (9).

6. Fragment of bowl with slightly incurved sharpened rim (9) 6-a almost similar as above (9).

7. Bowl of dull red ware with almost vertical featureless rim and flat base. Periods II and III.

8. Fragment of bowl of buff-red ware with vertical featureless rim (9).

9. Fragment of a bowl of buff-red ware with featureless rim (9).

10. Fragment of a dish of dull red ware with vertical featureless rim (9).

11. Fragment of a dish or bowl with externally grooved shoulder and hammer head rim. It is of light red ware medium fabric (11).

12. Fragment of a red ware vessel with a thickened rim (10).
Fig. 13. Bhir Mound. Red ware of Period II
13. Fragment of a dish with incurved rim of dull red ware (10).

14. Thick walled buff ware basin of coarse fabric with out-turned under-cut rim, it is bluntly carinated towards its base (9).

15. Fragment of a thick walled dull red ware vessel with internally corrugated sides and bluntly carinated roughened flat base (9) Periods II and III.

16. Lid with broken knob (9). BM-520.

17. Miniature beaker with flat base. It is of buff-red ware (9). BM-658.

**FIG. 13 (RED WARE OF PERIOD—II)**

1. Fragment of ‘ghara’ or water vessel with narrow neck and slightly out-turned rim. It is of light red or dull-red ware of medium to coarse fabric, occasionally treated with a red slip. Period II-III (11) variant 1-a was recorded with mat mark decoration (10) 1-b recorded with a weakly external ridge (9) 1-c. with an out-turned rim (12).

2. Fragment of a vessel of red or dull red ware with everted rim (9) variant 2-a with a mat-marked decoration on the body (10).

3. Fragment of a bluntly carinated red ware bowl with splayed-out rim (10). Variant 3-a with a grooved rim and carinated body (9) Periods II and III.

4. Fragment of a dull-red ware vessel with featureless rim (9).

5. Fragment of a vessel of red ware distinguished with a band of externally grooved rim (10).

6. Fragment of a jar with externally thickened rim. It is of dull red ware (10).

7. Fragment of dull red ware thick walled jar with almost vertical, narrow neck and out-turned rim. Of coarse fabric, it is treated with a red wash on the both internal and external side (9).

8. Fragment of buff-red ware vessel with out-turned externally grooved rim (9).
9. Fragment of 'ghara' or water vessel of buff ware with narrow out-curved neck and out-turned externally thickened rim (9). Variant 9-a of dull red ware with out-turned thickened rim (10). 9-b of dull red ware with everted thickened rim, vertical neck and mat mark decoration on the body (9).

10. Fragment of a deep bowl of dull red ware with flat base (9). 10-a Fragment of dull red ware vase with footed base (9). Variant 10-b, Indifferently fired buff-red ware base (9) 10-c with internally corrugated sides (9).

11. Fragment of red ware with out-flanged (rebated) rim, of medium fabric (9).

**FIG. 14 (GREY AND BLACK WARE OF PERIOD—II)**

1. Fragment of a dish or bowl of grey ware with slightly incurved featureless rim and incurved sides lowering towards a rounded base (9) 1-a almost similar as above with internally sharpened rim of black grey ware 1-b. variant of main type with incurved rim of black-grey ware (11).

2. Bowl of grey ware with a featureless rim and convex sides (9).

3. Bowl of grey ware with an incurved featureless rim and incurved sides (9).

4. Fragment of a bowl of grey ware with almost vertical thickened flat topped rim (11).

5. Fragment of a bowl or dish of grey ware with almost vertical thickened rim (11).

6. Fragment of a bowl, externally grooved or cordon shoulder with incurved internally thickened rim of grey ware (9) 6-a almost similar as above with a featureless rim (9) 6-b almost similar to the main with a internally sharpened rim (11).

7. Base fragment of a dish of grey ware, decorated on the inner side with a row of depressed circlets (11).

8. Bowl of grey ware with vertical featureless rim, it is almost carinated towards a rounded base (9).
Fig. 14. Bhir Mound. Grey and black ware of Period II
9. Fragment of a externally grooved bowl of grey ware with almost vertical internally sharpened rim (9).

10. Fragment of a grey ware dish with inturned rim and flat base (9).

11. Fragment of a black ware vase with an almost vertical long cordoned neck. It is of thin fabric of well levigated clay (11).

12. Fragment of a externally grooved black grey ware bowl with almost vertical sharpened rim (9).

13. Fragment of a bowl with almost vertical featureless rim. It is of dull red ware treated with a dull black slip (11).

14. Mid portion of a grey ware with irregularly grooved upper half (12).

15. Base-fragment of a bowl of grey ware (9).

16. Bowl of black-grey ware with almost vertical internally sharpened rim (11).

17. Fragment of a bowl of black ware with almost vertical thickened flat topped rim (11).

**Pottery of Period—III**

The pottery of Period III is of varied types. The bulk of red ware belongs to medium to coarse fabrics the clay of which contains some degraisants. The ware is generally unpainted, though painted sherds are not altogether absent. The designs in this case are painted in black over red surface. This period is characterised by the introduction of wine or oil jar with full body, cooking pot with carinated body, pear-shaped vases, pinched mouth jug, lid with boss handle, Tulip bowls and spouted vessels. The wine or oil jars are obviously meant for storing liquid. The coarse fabric ware has large storage jar and other bigger vessels. Most of the forms are entirely new. It may therefore be suggested that it belongs to a new tradition.

Aside from the new types introduced during Period III some types of earlier periods, i.e., I & II continued in Period III, with a slight variation.
As regards the grey ware, let it be stated at the outset that there is no similarity of fabric and colour between this ware and that found in the preceding Periods I and II. This ware is thicker in section, has a somewhat gritty core and rough blackish or dull grey surface and is not fired at such a high degree of temperature as the latter. It is mostly plain. In any case the ware, as a class is less compact and lighter in colour approaching more towards ash-grey, is debased and crude.

The common shapes met with included spouted vessel, bowls, dishes and water vessels.

The selected specimens are described below:—

**FIG. 15 (GREY AND BLACK WARE OF PERIOD III)**

1. Fragment of a grooved bowl of grey-black ware with a vertical featureless rim (8).

2. Fragment of a grey-black ware bowl with slightly incurved featureless rim (7).

3. Fragment of a grey-ware bowl or dish with almost vertical featureless rim, sides incurved to a saggar base (8a).

4. Fragment of a dish of grey ware with a slightly closing rim, it is bluntly carinated towards the base (6). Variant 4-a of thick grey ware with almost vertical featureless rim (6). Variant 4-b differs from the main type in being prominently carinated near the base which is almost flat (6).

5. Fragment of a bowl with slightly incurved rim, it is of grey ware treated with a black slip (8).

6. Fragment of a bowl of grey ware with incurved rim (8a).

7. Fragment of a bowl of grey ware with vertical featureless rim (6).

8. Fragment of a dish of grey ware with inturned rim. It is bluntly carinated and thickened on its lower edge (8).

9. Fragment of a grey ware ‘handi’ shaped vessel with a closing featureless rim. It is sharply carinated to a rounded base which is roughened in exterior (6). This type occurs both in grey and red ware and is
Fig. 15. Bhir Mound. Grey and black ware of Period III
available at Kausambi, Vaisali, Jhusi, Ahichhatra, Bhita and Hastinapur.

10. Fragment of a bowl of grey-black ware with weakly grooved almost vertical rim (6).

11. Featureless rim fragment of a grey ware bowl (6).

12. Fragment of a black-grey ware vase with externally thickened rim (8).

13. Fragment of a dull-black ware dish with incurved sides and a vertical featureless rim pronounced by an external ridge (8). Variant 13-a with a distinctive vertical rim and sides of grey ware (8).

14. Dish of grey-black ware with a internally bevelled rim and almost a flat base of medium fabric, it seems to have been given a thin black slip on the exterior only.

15. Fragment of a ‘Ghara’ or Water vessel with a thick out-turned externally grooved rim of a dull grey ware (6).

16. Fragment of a indifferently fired miniature vessel with an out-curved nail head rim. It is of grey ware, externally treated with a black slip (8a).

17. Fragment of a bowl or dish of grey ware with a sharply carinated flat base (8). 17-a internally roughened almost similar to above (8).

18. Fragment of a dish of black-grey ware with imperfectly flat base (8).

19. Fragment of a ill-fired dull-black ware vase with elliptical body (8a).

20. Miniature vessel of grey ware with wide mouth, grooved shoulder and flat base (7).

21. Fragment of a spout of grey ware (6).

FIG. 16 (RED-WARE OF PERIOD III)

1. Fragment of storage jar with out-turned externally thickened rim and short narrow neck. It is of thick texture coarse fabric of buff-red ware (7).
Fig. 16. Bhir Mound. Red ware of Period III
2. Probably a large storage jar is notable both for its shape and colour. It is buff-red ware with externally thickened rim. Of thick fabric, its clay reveals husks or chopped straw, an ingredient, which is generally found in the clay of the storage jar (6).

3. Fragment probably of a large jar, is notable both for its shape and colour. It is buff-red or pale red ware of thick fabric and its clay reveals husks or chopped straw, an ingredient which is generally found in the clay of the storage jars (6). 3-a Variant with a incised linear decoration on the exterior.

4. Narrow necked wine or oil jar with full body. Clay mixed with black and white sand indifferently knealed. Two lightly incised bands above shoulder. No trace of slip or wash (6) BM-666.

5. Thick walled vertical sided cup or tumbler with heavy flat base. It is of coarse fabric of dull red ware (6).

6. Fragment of a basin with weakly grooved externally collared rim (6).

7. Thick walled basin with a slightly incurved angular bead rim and externally grooved body tapering profile of dull red ware. It is of greyish red or light red ware and is normally of coarse gritty fabric. Sometime it is treated with a red slip both inside and outside (6) 7-a Variant with a wavy groove on the exterior (6).

8. Fragment of a basin of pale red ware with an incurved externally oval-collared under cut rim (6).

9. Thick walled basin with externally beaded rim, grooved body with tapering profile of pale red ware. It is usually treated with red slip both inside and outside (6).

**FIG. 17 (RED-WARE OF PERIOD III)**

1. Vase of buff-red ware with a distinctive out turned flat topped rim.

2. Dull red ware vase with a thick out turned rim short narrow neck (6).

3. Fragment of bowl marked with band of externally relieved grooved and a vertical flat topped rim. It is of indifferently fired light red or pale red ware (8).
Fig. 17. Bhir Mound. Red ware of Period III
4. Carinated bowl of dull red ware with a vertical featureless rim (8).
5. Externally grooved bowl of dull red ware with a vertical featureless rim. It is bluntly carinated towards its base (8).
6. Bowl of dull red ware with a vertical featureless rim, it is bluntly carinated towards its base (rounded). Of medium fabric it is devoid of any slip or wash (6).
7. Externally grooved bowl of light red ware with almost sharpened rim (8).
9. Bluntly carinated bowl of redish ware with a nail head rim (6).
10. Bluntly carinated bowl with broad flaring rim of dull red ware (8a).
11. Multi grooved shoulder, bluntly carinated bowl of light red ware with distinctive out turned flat topped rim (6a).
12. Basin of dull red ware with dropping rolled rim (6).
13. Basin with a hammer head rim, bluntly carinated body of light red ware (6).
14. Fragment of a externally grooved bowl with a nail head rim of light red ware (8).
15. Fragment of a externally grooved bowl with vertical featureless rim. It is of thin fabric of pale red ware (7).
17. Deep bowl of red ware with vertical thinning rim straight side and a bluntly carinated flat base. Externally double grooved shoulder. It is thin fabric of well levigated clay (8a).

FIG. 18 (RED-WARE OF PERIOD III)

1. Pear shaped vase of light red or dull red ware with a vertical externally pronounced ridged rim (8) variant 1-a differs from the above in
Fig. 18. Bhir Mound. Red ware of Period III
having a prominent external rib (7) variant 1-b differs from the above in having a less pronounced ridge (6) variant 1-c differs from the main in having a thickened vertical externally collared rim (6). This is one of the principal types of the period and occurs along with its variants at Ahichhatra, Kausambi, Hastinapur, Jhusi, Bhita and Vaisali.

2. Ghara or water vessel with a distinctive flanged rim. It is of a light red or brick red ware of medium fabric and is devoid of slip (6). Variant 2-a differs from the above in having a groove above the flange (6).

3. Water pitcher 'ghara' of dull red ware with out-turned externally under cut rim (6).

4. Fragment of dull red ware vase with an almost spheroid body and flat base (8a).

5. Fragment of a miniature red ware vase with out-curved rim. It is of medium fabric treated with a red slip (8).

6. Fragment of a vase with a hammer head rim. It is of dull red ware treated with a red wash (7).

7. Fragment of 'Ghara' or water vessel with narrow neck and thick out-turned rim. It is of dull red ware or light red ware and medium fabric (8).

8. Fragment of a 'ghara' or water vessel with a thick out turned rim and concave neck of red ware (6).

9. Fragment of 'ghara' or water vessel distinguished by an externally collared and grooved rim (6).

10. Fragment of a 'ghara' or water vessel distinguished by two external grooves. It is of pale red or light red ware of coarse fabric (8a).

11. Fragment of a vessel with almost vertical externally thickened rim. It is of buff red ware with gritty surface (8).

12. Fragment of 'ghara' or water vessel with a thick out-turned externally double grooved rim and narrow neck of buff-red ware (7).
Fig. 19. Bhir Mound. Red ware of Period III
13. Vase with a out-turned indistinctly grooved under cut rim. It is of dull red ware (8).


15. Fragment of a cooking pot of light red ware with carinated body and loop handle (6).

**FIG. 19 (RED-WARE OF PERIOD III)**

1. Tulip bowl or cup, little round bottomed vessel of buff ware with a 'kick' or slight carination half way down the side (7).

2. Ring base, light red ware with smooth inner face (8).

3. Fragment with a sharply carinated flat base. It is of well levigated fine clay, thin fabric of red ware treated with a bright red slip.

4. Fragment of everted rim, pinched mouth jug with a grooved cordon round neck. It is of fine bright red clay with darker red wash. BM-659 (7), (Plate XV.b, 2).

5. Fragment of a buff red ware cooking vessel ‘handi’ a closing featureless rim and sharply carinated shoulder and roughened exterior surface below the carination (6) 5-a variant with a beaded rim and grooved exterior of light red-ware (7).

6. Miniature pot with inturned rim and flat base BM-147. Plate XV b, 3. (6) 6-a variant with a incurved rim and slightly convex base BM-386 (8).

7. Bowl of dull red ware distinguished by an incurved rim and flat base. BM-574 (7) 7-a variant of above with corrugated sides BM-376 (6a), (Plate XIV.b, 6-7).

8. Fragment of a internally grooved deep bowl of buff red ware with a vertical thin rim (8).

9. Bowl of dull red ware with almost vertical featureless rim, tapering sides and flat base BM-665 (7), (Plate XIV.b, 4).

10. Regularly curved bowl of buff red ware with featureless rim (7).
11. Bowl of dull red ware with gradually tapering sides and slightly incurved rim (6).

12. Fragment of a bowl with constricted flat base of dull red ware (6).


14. Lid with boss handle BM-146(6) (Plate XV. b, 4). 14-a almost similar as above with broken knob. BM-145 (6).

**Pottery of Period—IV**

The pottery from period IV is all wheel-made and is almost of dull red ware. The fabric ranges from coarse to fine. The paste, as a rule, is medium, sometimes coarser, tempered with sand which often contains larger particles of grit. Usually no surface wash is met with and, wherever available, it approximates to the colour of the paste. The distinctive forms in this ware are storage jar, water vessel and bottles for the transportation of water, bowls and dishes of a wide range, oil lamp and fragment of censor or offering stand.

A description of selected specimens follows:—

**FIG. 20 (PERIOD)**

1. 'Tulip Bowl', of dull red ware. It is a little round bottomed vessel of a buff or brownish ware, wheel turned, with a 'kick' or slightly carination near the bottom or base. BM-69 (3), (Plate XV. b, 1).

2. Fragment of a bowl or cup, red-buff ware flared out featureless sharp rim. Cordon body (5).

3. Fragment of a bowl of buff-red ware with vertical featureless rim and incurved sides (5b).

4. Lid of pale red ware with splayed out, internally grooved rim. It is of coarse fabric mixed with grit. BM-586 (4).

5. Small narrow necked vessel with an elliptical body, flaring rim, grooved shoulder and flat base. It is of dull red ware. BM-538 (4).
Fig. 20. Bhir Mound. Pottery of Period IV
4-a Variant of above with a thickened base and plain body (4). BM-515. (Plate XV.b, 8-9).

6. Miniature vessel with a wide mouth, bulging body and a flat base. BM-564 (4). (Plate XV.b, 10).

7. Miniature vase of buff ware with an out-turned rim marked with traces of handle and a concave neck.

8. Fragment of a vase of red ware with an out-turned externally thickened rim and concave neck (5b).

9. Fragment of a vase of buff-red ware with an out-turned externally obliquely bevelled rim and a concave neck (5b).

10. Fragmentary specimen, with an internal loop-handle, gives no clue to its original shape (5).

11. Tulip bowl or cup, slightly flared out featureless sharp rim, kick or slightly carination half-way down the side of dull red ware (5).

12. Modified ‘Tulip Bowl’ externally grooved body with flat base of brick red ware, or small vessel of reddish ware with ‘S’ profile BM-84 (3).

13. Convex lid with boss handle above, with or with-out rim BM-224 (5b).

14. Vase of red-buff ware with an almost vertical featureless rim and weakly corrugated shoulder of thin fabric. It is treated with buff slip (5).

15. Fragment of a vessel of red-buff ware with externally thickened rim and vertical narrow neck (5).

16. Fragment of vase of dull red ware with out-curved thickened rim, externally grooved of medium fabric devoid of slip or wash. Variant 16-a was recorded with a distinctive grooved rim (5).

17. Fragment of a ‘ghara’ or water vessel distinguished by a externally double grooved rim. It is of red buff ware (5b).

18. Fragment of a vessel of dull red ware distinguished by vertical externally multi grooved rim (5b).
19. Fragment of a ‘Ghara’ or water vessel, distinguished by externally thickened double grooved rim and a short narrow neck. It is of dull red ware (5b).

20. Fragment of a vase of dull red ware with an out-turned featureless rim and a short concave neck (5).

21. Fragment of a vase of light red ware with nailhead rim (1).

22. Fragment of a medium sized neckless vessel with bead rim of red ware (5b).

**FIG. 21 (PERIOD IV)**

1. Terracotta lamp of small shallow bowl with pinched mouth for wick. BM-79 (3a) (Plate XIV.b. 8).

2. Fragment of a basin with slightly incurved dropping roll rim of dull red ware.

3. Fragment of a bowl of dull red ware with slightly incurved clubbed and rounded rim (5b).

4. Bowl distinguished by an incurved rim, tapering sides and flat base. It is of a dull red or light red ware of medium fabric. BM-106 (5). 4-a almost similiar as above (5). Variant 4-b differs from the above in having corrugated sides (3a). Variant 4-c differs from the main in having externally corrugated sides (5). All other variants occur almost in period III-IV of Bhir Mound and throughout Sirkap. This type is also found in contemporary strata on other Indian sites such as Ahichhatra and Maholi.

5. Bowl of dull red or buff red ware with slightly incurved rim and sides tapering to a flat base. Variant 5-a was recorded with corrugated sides (5b) 5-b almost similar as above (5).

6. Dish of dull red ware with a horizontally splayed out rim, carinated towards the base (5).

7. Fragment of a dish or basin of dull red ware with an inturned featureless rim (3).

8. Fragment of a dish or basin with a hammer-head rim, bluntly carinated body of light red ware and medium fabric (4).
Fig. 21. Bhir Mound. Pottery of Period IV
9. Fragment of a vase of dull red ware with a distinctive thickened rim (3a).

10. Fragment of a vase of pale-red ware with an externally collared and grooved rim and a concave neck. With grey core it is of clay mixed with straw and is of coarse fabric (3b).

11. Fragment of a narrow necked oil or wine vessel of coarse buff clay, here restored from examples in the Taxila Museum. It is most probably for storing liquid (3a).

FIG. 22 (PERIOD IV)

1. Fragment of a dish or bowl of dull red ware with a vertical featureless rim (5).

2. Fragment of a dish or bowl of light red ware with a featureless rim, tapering sides and carinated shoulder (3).

3. Dish or bowl of dull red or light red ware with a vertical featureless rim, it is bluntly carinated towards a rounded base BM-645 (3a). Variant of above with a internally thickened rim (3) 3-b, Red-buff ware variant of above (3a) (Plate XIV. b, 2).

4. Bowl of dull red ware with a vertical flat topped rim, it is bluntly carinated towards a rounded base. Of medium fabric, it is devoid of any slip or wash BM-557 (4) (Plate XIV. b, 3).

5. Bowl of dull red and light red ware with a vertical featureless rim and a flat base. BM-650B (5) 5-a variant of above with weakly corrugated sides. BM-89 (3).

6. ‘Ghara’ or water vessel with a distinctive flanged rim and an elliptical body here restored from example in the Taxila Museum. It is of a brick red ware of medium fabric and is devoid of slip (5). It also occurs in late levels of period III on this site and mid levels of Sirkap.

7. Pear shaped vase of dull red or light red ware with a vertical externally pronounced ridged rim (5b). Variant 7-a differs from the above in having a vertical externally thickened rim. Variant 7-b differs from the above in having a corrugated body (5). (Plate XV. b, 6).
Fig. 22. Bhir Mound. Pottery of Period IV
Excavation

7-d Buff-red ware variant of main types with out-turned obliquely cut rim and rounded base BM-661 (5). This is one of the principal types of the period and also occurs along with its variant in the late levels of period III on this site. The representative examples have also been found at Ahichhatra, Kausambi, Hastinapur, Jhusi, Bhita and Vaisali.

8. Fragment of a bowl of dull red ware with a imperfectly flat base (5).

9. Cup or a tumbler of red buff ware with almost vertical sides and flat base BM-652 (3a) (Plate XV. b, 7).

10. Fragment of a bowl of light red or dull red ware with tapering sides and carinated flat base (5b). Variant 10-a was recorded with a weakly grooved carinated flat base (5b).

**FIG. 23 (PERIOD IV)**

1. Fragment of a vessel of dull red ware with externally thickened rim (3).

2. Ring stand for large 'Catis' or 'ghara', with closed top or hollow ring stand with concave closed top and sharp angular rim (3).

3. Fragment of censors or offering stand, hollow stem and moulded neck. It is light red ware coarse fabric (3).

4. Fragment of water-bottle with short narrow neck, circular in shape with one side flattened, here restored from examples in the Taxila Museum. It is of a form facilitating to be carried on person with the help of a cord over the shoulder. It is of light red ware with creamy white slip (5b).

5. Fragment of a large storage jar of rough dull red ware with internally thickened rim (5b).

6. Fragment of a large storage jar of rough dull red ware with externally thickened under-cut rim (3).

7. Pedestal of red ware (3).

8. Neck of a flanged large jar of dull red ware decorated with a row of punched triangles.
Fig. 23. Bhir Mound. Pottery of Period IV
9. Fragment of a basin with externally grooved shoulder below a drooping round rim. It is of light red or buff red ware medium fabric. (3) 9-a, variant of above having a slightly incurved clubbed rim (5b) 9-b, variant of above having an incurved and externally thickened rim (3) 9-c, variant of main type with a distinctive thickened rim (3).

10. Fragment of a basin of dull red ware with a distinctive thickened rim. It is of coarse medium fabric (3).

11. Fragment of a basin of dull red ware with thickened oval collared rim (3).

12. Fragment of a basin with externally thickened weakly grooved ridged rim. It is of light red ware (3b) 12-a, variant of above with a distinctive thickened rim of dull red coarse fabric, (3a).

**Decorative Ware**

Decorative pottery from Bhir Mound forms very small percentage, the decoration consisting of stamped, incised, finger-tip, painted and mat impressed patterns. The decoration and design impressed with mat and basket are of more frequent occurrence. The painted decoration in black on a red slipped ground occurs on two sherds comprises parallel ruling filled in triangles and cross hatched. The moulded sherds are few and interesting. A vase with an elaborate designs and two fragments with horned stylized animal impression are of great significance. A sherd is recorded with punched triangle while two fragment showed finger-tip and rope decoration.

**Stone Ware**

Two fragments of turned stones were discovered from Period III and IV respectively.

The following are the selected specimens of the decorative and turned stone ware.

**Fig. 24 Decorative Ware**

1. Fragment of a buff red ware with irregularly grooved surface (15) (Plate XV. a, 1).
Fig. 24. Bhir Mound. Decorative and stone ware
2. Fragment of a dull red ware with irregular wavy grooved surface (Plate XV. a, 2). A variant of above with a regular grooved surface (14).

3. Fragment of a buff ware with a chequered stamped surface (14).

4. Fragment of a light red ware with irregular grooved surface (14) (Plate XV. a, 3).

5. Fragment of a light red ware with irregularly vertical grooved surface (11) (Plate XV. a, 4).

6. Fragment of a light red ware with almost horizontally wavy grooved surface (10).

7. Sherd of dull red ware decorated with an applied strip bearing finger-tip impressions. It is of dull red ware with greyish core due to indifferent fire and red slip out side (7).

8. Fragment of a grey ware base internally decorated with a stage 3 stamp BM-194 (6) (Plate XV. a, 5).


10. Sherd black painted with criss-cross pattern. It is of light red ware externally treated with a red slip (7).

11. Sherd black painted with parallel ruling filled in triangles, bordered above and below by horizontal bands. It is of medium fabric light red ware (7) (Plate XV. a, 6).

12. Fragment of a buff red ware vase with an elaborate moulded design (5) (Plate XV. a, 7).

13. Squat miniature vase of unique shape at the site. It is decorated on the outside with incised chevron and cross patterns BM-609 (5) (Plate XV. a, 8).

14. Fragment of a moulded red ware with the impression of stylized animal BM-255 (4) (Plate XV. a, 9).

15. Neck fragments decorated with a row of punched triangles. Gritty light red ware of coarse fabric with greyish core due to indifferent fire (3b) (Plate XV. a, 10).

16. Ring pedestal base with a smooth internal surface (6).

17. Saucer like lid of soap stone (3).
PRELIMINARY REPORT ON THE HUMAN SKELETAL REMAINS FROM THE PREHISTORIC CEMETERY OF SARAI KHOLA

(Plates XVI — XX)

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I. INTRODUCTION: ARCHAEOLOGICAL BACKGROUND

At the end of 1967 the Exploration Branch of the Department of Archaeology, Government of Pakistan discovered a new prehistoric site near Taxila, the famous Buddhist centre of Gandhara region. The new site, designated as Sarai Khola after the name of a small village nearby is situated close to the great Trunk Road connecting Peshawar and Rawalpindi and only two miles south-west of Bhir mound, the earliest settlement of Taxila.

The surface collections already consisting of chert stone flakes, microblades, cores stone celt, as well as pottery of Kot Diji type, terracotta figurines etc., suggested the importance of this new prehistoric site. According to Dr. F. A. Khan the discovery of this new prehistoric site is “as dramatic as the epoch-making discovery of Harappa, Mohenjodaro, Amri and Kot Diji” as the evidences brought to light by the material found at Sarai Khola have not only pushed back the ancient history of Taxila region by at least 2,000 years but also are able to bridge some missing gaps in the ancient history of the subcontinent (compare Dr. F.A. Khan 1968).

The archaeological importance of this new site could be confirmed by the first excavation season performed from January till May 1968, which clearly showed four occupation periods of Sarai Khola mound
(compare the preliminary archaeological excavation report of M. A. Halim, to be published in "Pakistan Archaeology", henceforward abbreviated as Halim 1968).

Period I:

The lowest levels just above the virgin soil have revealed for the first time in West Pakistan remains of a late neolithic settlement, well attested by the presence of stone celts with sharp polished edges, flint blades and highly burnished pottery.

Period II:

This period at Sarai Khola is marked by the discovery of pottery of typical Kot Diji culture well known from the pre-citadel levels at Harappa, Jalilpur, Bhoot and Kot Diji. At the lowest levels of period II, the typical Kot Diji pottery is to be found along with the neolithic burnished pottery, which in later layers decrease in the same amount as the ceramics of Kot Diji type increase. Therefore it seems evident that the occupation of Late Neolithic Culture lingered on during the early Kot Diji Culture and ultimately submerged in the new culture.

Period IV:

The latest phase of human occupation of Sarai Khola mound (Period IV) is attested by the presence of stone walls, fire places, pottery, terracotta figurines, as well as other small finds, representing a culture of unknown type.

Period III:

One of the most important and also unexpected findings of the excavation was the discovery of a prehistoric cemetery separated by layers of deposit from Kot Diji Period (period II) and the late phase of human occupation (period IV) and thus consequently designated as period III (compare Halim 1968). The regular cemetery of Sarai Khola mound is unique in the whole Pak-Indian subcontinent as parallels concerning burial position, orientation, etc., are nearly totally missing (compare Halim 1968; chapter: Place of Sarai Khola cemetery in the history of Pakistan).

The skeletons exposed so far at Sarai Khola show that the graveyard was laid on a regular plan. The dead bodies were buried in parallel
rows, in extended position, orientated from east to west (head in the east, feet in the west). The bodies are lying on their back, the heads with gaping mouths are mostly placed on the left cheek facing north, or on the occiput and facing skywards. The arms are extended and placed parallel to the body. In some cases one or both forearms are slightly bent and the hands lying in the pelvic region. Halim (1968) suggests that this latter posture of the hands and arms is the typical burial position of females while the arms of the males are stretched parallel to the body. He is also of the opinion that males and females were buried in separate rows (see also section II).

In the cemetery of period III two different sub-periods could be stratigraphically distinguished in stratum II representing the earlier period and in the younger stratum I. The burial position of both sub-periods are identical. Slight differences are only observed regarding the construction of the graves. In stratum I the grave pits are deeper and the top of the graves are covered by stone sealings, which are missing in the graves of the earlier stratum II.

One of the most important and also unique characteristics of the cemetery is the absence of any grave furniture, so that the people who used the Sarai Khola mound for the disposal of their dead remain at present archaeologically unidentified.

Nothing can be said concerning the exact chronological position of the cemetery. At the present state of our exploration we only know that the cemetery is stratigraphically situated between a period of Kot Diji Culture and a late phase of human occupation, most probably earlier than the earliest phase of Taxila which commenced in the 6th century B.C. From these facts we can only conclude, that the prehistoric people who used the Sarai Khola mound as burial ground were living at some time or other between 3 and 2 Millennium B.C.

More detailed informations concerning the historical age of the cemetery are to be expected from radio-carbon datings which will be performed on bone material in near future.

Since it is not possible from an archaeological point of view to get at present any information concerning the unknown people buried in the prehistoric site of Sarai Khola due to the missing of grave-furniture and
other cultural remains, the anthropological analysis of the skeletal material is of special importance.

By the kind invitation and the financial support of the Department of Archaeology, Government of Pakistan and the German Research Foundation (Deutsche Forschungsgemeinschaft) the author was able to stay in Taxila during November 1968 for collecting and anthropological study of the skeletal material exposed during the first excavation season.

II. AGE, SEX AND BURIAL POSITION OF THE SKELETAL REMAINS

The first excavation season revealed skeletal remains of 47 individuals at the main and northern trench of Sarai Khola mound. In this number are included 5 skeletons of children mostly represented only by tiny bone fragments as well as some skeletons of grown up individuals which had not been collected as the main portion of the bodies, including the skulls, were still in the section.

Although the skeletal material of the remaining skeletons were partially in a very bad state of preservation and fragmentary condition, 28 skulls of grown up individuals were complete or could be restored so that they were useful for anthropological study. Out of these skulls, 25 belong to the earlier stratum II and only 3 to stratum I. In addition a great number of complete long bones useful for determination of the stature could be salvaged. The determination of the age at death on the basis of cranial suture closure, the attrition of the teeth and other characters (compare Bernhard 1967, p. 293) clearly show, that the life expectancy of the prehistoric people of Sarai Khola mound was not very high. Most of the individuals died at the age group of 20-40 years and only a small percentage reached a higher age. This is in full agreement with the demographic results of other prehistoric populations. A detailed demographic analysis will be given in the final report.

According to the anthropological determination of sex (compare Bernhard 1967, p. 294) 17 out of the well preserved skulls belong to male individuals, while the rest were determined as females. This shortage of the females is due to the well known fact, that the more massive male skulls are mostly in a better state of preservation than the gracile female skeletons. If we take the whole skeletal material into consideration, males and females are nearly equally represented in the excavated area.
The anthropological sex determination could on the whole confirm the assumption of Halim, that there are sex differences concerning the burial position (see p. 101).

This is especially true of individuals determined as females who were all showing the typical female burial position with one or both hands lying in the pelvic region. Exceptions of this rule were only observed in a few cases. They are concerned with skeletons anthropologically clearly determined as males, which were however buried in the typical female burial position. A satisfactory explanation of this discrepancy is, however, not possible at the present state of our exploration.

Yet the anthropological sex determination could not approve the suggestion of Halim (1968), that males and females were buried in separate rows.

III. GENERAL ANTHROPOLOGICAL CHARACTERISTICS OF THE SKELETAL REMAINS FROM THE CEMETERY OF SARAI KHOLA

The anthropological investigation of skeletal material is based on the detailed analysis of the morphological features of the bones, especially the skulls, which represent anthropologically the most important part of the human skeleton.

One of the principal methods of anthropological analysis is the quantitative investigation of the bone material, i.e., the performance standardized measurements, which serve as basis for the objective comparisons of skull series from different sites and chronological periods. The absolute metrical values give an idea concerning the size of skulls and long bones in their main dimensions, whereas from the ratios between them (the indices) conclusions can be drawn regarding the main proportions of the bones.

A. SKULLS

As a detailed analysis of the metrical and non-metrical characters of the single skulls is not possible in this preliminary report the present investigation should be restricted to the general characteristics of the whole skull series and will be based on the averages (arithmetic means) of the main craniological measurements and indices, which are given for the male group in table 1.
According to these measurements the skulls from the prehistoric cemetery of Sarai Khola are medium in length (183.2 mm) and comparatively broad (cranial breadth 141.9) thus resulting a cranial index of 77.5 which is distinctly mesocranic. The height of the skulls is relatively low as indicated by the low basion-bregma height (130.1 mm) and the breadth-height index being 91.7 (tapainocranic). The length-height-index (71.0) is still orthocranic but close to the border of the low-headed (chamaecranic) category of this index.

The facial part of the skull is medium in height (total facial height 116.0, upper facial height 68.8) whereas the breadth measurements of the face (frontal breadth, bizygomatic breadth and the bigonal diameter of the lower jaw) exhibit relatively high values indicating on the whole a broadfaced population group. The total facial index and the upper facial index being 87.2 and 51.7 are mesoprosopic and mesen and thus belonging to the medium categories of these indices. The same is true of the orbital index (83.7) and the nasal index (42.3), which are mesoconchic and mesorrhinic respectively. Both indices are however ranging close to the border of the neighbouring categories, the nasal index near leptorrhyny and the orbital index close to the border of the hypsiconchic group. Thus we are dealing with a population characterized by relatively high orbits (eye holes) and a comparative narrow nose. From the non-metrical characters only the prominence and in some cases aquilinity of the nasal bones and a certain degree of alveolar prognathism of most of the skulls may be mentioned.

In the average the prehistoric population of Sarai Khola cemetery is thus relatively short- and broad-headed, low-vaulted, with medium height but comparatively broad face with a certain degree of prognathism, high orbits and a narrow and prominent nose, giving the skulls an Europoid appearance. The same characters are also true of the numerically smaller female group, showing, according to the known sexual differences, smaller values for the absolute cranial measurements, as compared with the males, but nearly the same values for the indices.

If we take into consideration the individual measurements and indices of the single skulls it becomes, however, evident that the prehistoric population of Sarai Khola was anthropologically not a homogeneous group. The frequency distribution curve of the cranial index, in the past considered as one of the most important metrical characters for
racial classification, clearly exhibits two peaks, one at 72 and the other after a long gap at 81. From this metrical character it can be concluded that the prehistoric population of Sarai Khola is represented by at least to different anthropological types: a short- and broad-headed (Fig. 1 and 2), and a long- and narrow-headed type (Fig. 3 and 4), which can be observed especially in the male group. The variation range of the cranial index is very broad with the limits of 62,9 and 86,7 respectively.

Out of the 28 skulls, the cranial index of which could be determined, 13 skulls (46,6 per cent) are distinctly round-headed (brachycranic) showing length-breadth indices over 80. Only 7 (25 per cent) skulls are dolichocraninc (long- and narrow-headed) with cranial indices below 75, while the rest (28,6 per cent) are in most of the cases highly mesocranic.

The analysis of the metrical as well as the non-metrical characters clearly reveals, that these basic craniological types present in the prehistoric population of Sarai Khola differ concerning other morphological features, too.

The long-and narrow-headed (dolichocranic) skulls exhibit (beside others) in the average a greater absolute cranial length, and lower cranial breadth, lower values for the nasal index (more narrow nose) and higher values for the orbital index (higher eye holes) than the round-headed group. In addition the dolichocranic skulls show more prominent noses and a lesser degree of alveolar prognathism.

Though the material standing at our disposal is numerically very limited, it seems likely that the long- and narrow-headed group can be further subdivided from a typological point of view. One of the dolichocranic skulls shows special morphological characters like a very low and receding forehead, a strongly marked glabellar and superciliary region, a high degree of alveolar prognathism, well developed muscular attachments and in the whole a very archaic appearance (Fig. 5). The skull is differentiated by these morphological features from the other long-headed, but on the whole more smooth and gracile, skulls (Fig. 3 and 4) and thus it may be considered as representative of a different craniological type.

It will become evident in the following chapter that this archaic craniological type represented in our material only by one skull is very
common among the skeletal material available from other sites of the Pak-Indian subcontinent.

At the moment nothing definite can be said concerning possible morphological differences between stratum I and II of Sarai Khola cemetery, as from the later stratum I only a few skulls are available which are in a very poor state of preservation. Yet, it is hoped that the material which is expected from the second excavation season may help to answer this question.

B. POST-CRANIAL SKELETONS AND STATURE

A detailed analysis of the post-cranial skeletons, especially the long bones will be given in the final report. Only a few notes concerning the stature determined from the measurements of the long bones according to the tables of Manouvrier may be mentioned here. The average stature determined on the basis of long bones of 15 male individuals was found to be 167.8 cm, with a variation range between 159 and 179 cm.

Slightly higher values were observed for the long- and narrow-headed individuals. Due to the relatively small number of long bones available from both cranial groups it is, however, at present not possible to draw final conclusions from these differences.

IV. THE MORPHOLOGICAL AFFINITIES OF THE HUMAN REMAINS FROM SARAI KHOLA TO OTHER PRE- AND PROTOHISTORIC SKELETAL FINDS FROM PAK-INDIAN SUBCONTINENT

The pre- and protohistorical anthropological material from the Pak-Indian subcontinent useful for comparison purposes is very limited. Beside the single skull findings from Sialkot, Nal, Chanhu Daro, Bayana, Piklihal (compare Ehrhardt 1964) only a few longer skull series are available. Most important is the anthropological material from Mohenjodaro (Sewell and Guha 1931, Guha and Basu 1938), Friedrichs u. Muller (1933) and Harappa (Gupta, Dutta, Basu 1962), the two main centres of Indus civilisation. At Harappa skeletal remains were found at cemetery R 37, belonging to the mature Harappan culture and at the post-Harappan cemeteries H II (open burials) and H I (urn burials). A greater number of skeletons were also uncovered in Area G 289 at Harappa (compare Gupta, Dutta and Basu 1962), which were found in a tightly packed condition mixed with potsherds and animal bones in a narrow trench.
and highly probable do not represent regular burials. Most of the authors (e.g., Gupta et al, 1962, p. 95, Sarkar, 1964, p. 86) agree that the "G area remains probably represent an abortive attempt of an immigrant population to settle at Harappa. The skeletal remains probably indicate that they were completely annihilated" (Sarkar 1964, p. 86). Yet it remains undecided at which period this invasion took place. Sarkar is of the opinion that stratum II of area G in which most of the skeletons were found, may be equated with stratum II of cemetery H (Sarkar 1964, p. 55).

In an earlier publication, Sarkar (1954, p. 144) is of the opinion that the skeletons from Area G belong to the people buried in stratum II of cemetery H, which were killed during a clash with the invading stratum I people and were thrown in a dump at this spot after the warfare. According to Sarkar this assumption is supported by the fact, that the racial types represented in some parts of Area G and in the second stratum of cemetery H appear to be closely related.

A small number of skulls are also available from the late Harappan settlement of Lothal in Gujrat (Chatterjee and Kumar, 1963). In recent times the pre- and protohistoric anthropological material has been enriched by the skeletal material of the Bronze and Early Iron Age cemeteries of Gandhara Grave Culture from Timargarha in Dir-State (Bernhard 1967) and Butkara II in Swat (Alciati 1967).

Further anthropological material is available from the probably neolithic site of Langhnaj (Ehrhardt and Kennedy 1965), the megalithic culture of Brahmagiri (Sarkar 1960), the chalcolithic and Indo-Roman levels from Nevasa (Kennedy and Malhotra 1966) and from Aditannalur (compare Zuckerman 1930, Sarkar 1954, 1964).

The skeletons from Langhnaj, Brahmagiri and Nevasa are, however, in such a bad state of preservation that no proper metrical and morphological analysis was possible, whereas only a few measurements and morphological data are at our disposal from the Aditannalur skulls which are of doubtful historic age (compare Zuckerman 1930).

In Table I the main craniological measurements and indices of the most important of these prehistoric skull series are recorded along with the metrical data of Sarai Khola material (only males).
Without entering in a detailed comparative metrical analysis which will be done in the final report, it can be concluded from these metrical data, that close affinities are observed to the skeletal material of the late phase of human occupation at Harappa, especially cemetery H II and Area G, and to a certain degree to the few skulls from Lothal too. This is not only true of the cranial index, but also of some other indices and absolute measurements, as can be seen from the Table I. Contrary to this, the metrical differences to the other series taken into consideration for comparison purposes, including the early anthropological material from Harappa (cemetery R 37), are relatively great.

The metrical affinities of Sarai Khola skulls especially to the anthropological material of post-Harappan period are mainly based on the presence of a relatively round-headed racial element in all these cranial series. In the earliest known material from Harappa (cemetery R 37) only long-headed cranial types are present, designated by Gupta Dutta and Basu (1962) as types A and A₁.

According to these authors the archaic, rugged and sturdy-built prognathic skulls of type A from Harappa are morphologically similar to “Group A” skulls from Mohenjodaro (Guha and Basu) which had been also designed as Proto-Australoid (Sewell and Guha), Caucasian (Keith), Vedoid (Friedrichs and Müller), Eurafrican (Buxton and Rice), Veddi, Vedoid, Dravidoid (v. Eickstedt), Predravidian (Lapique), Australoid-veddaic (Ruggeri), Protodravidian (Thurstone) etc., (compare Gupta et al 1962, p. 58, Ehrhardt 1964, p. 44). According to Gupta and A1, this skull type is also connected with the so called Proto-nordic and Pseudo-australoid type from Tepe Hissar (Krogman 1940).

Type A₁ is also long- and narrow-headed, but on the whole, more smooth and gracile. This type A₁ of Harappa is similar to “Group B” of Mohenjodaro, which has been designated as Mediterranean (Sewell and Guha), Indo-european (Kappers), Caspian (Dixon) etc., (compare Gupta et al. 1962, p. 59, Ehrhardt 1964, S. 45).

In the anthropological material of the later phase of human occupation of Harappa (cemetery H II and I, Area G) beside these long-headed skulls comparatively round-headed types are found, and designated as B₁ and B₂. In cranial and facial dimensions type B2 skulls are distinctly larger than those of type B1, which is most marked in the calvarial
length. In addition B1 crania differ from B2 skulls by lower face, a broader nose, lower cranial height, and more retreating frontal bones (Gupta et al., p. 126). According to Ehrhardt most of the skulls from Harappa belonging to this type (B1) show a considerable degree of prognathism (Ehrhardt 1964, p. 46). In the opinion of Gupta et al., (p. 94) morphology and cranial proportions of type B1 are in close agreement with the round-headed “Alpine” type of Hissar III (Krogman 1940), while the B2 type is considered as “an Alpine variant or a mixed variety of the Alpine” (Gupta et al., p. 126).

In Area G of Harappa the round-headed crania of type B1 were found huddled together with the long-headed gracile type A1, whereas the rather tall, large-and round-headed type B2 was discovered at cemetery H stratum II along with skull types already familiar to us from mature Harappan culture of cemetery R 37 (i.e., type A and A1). Type B2 was also found in cemetery H, stratum I, beside the long-headed types A and A1 and a rather medium-statured, small- and medium-headed, low-faced type, represented only by female skulls and designated by Gupta et al., as type A2. According to these authors “type A2 skulls may be identified as a smaller form of classic Mediterranean and in all probability they were not identical with earlier population of Harappan culture” (p. 159).

When we consider with this background the skeletal remains from Sarai Khola it becomes evident that the typological composition is very similar to the anthropological material from post Indus Civilisation Period of Harappa.

As has been shown in an earlier section a distinctly round-headed type, representing nearly 50% of the skeletal material is most common. The average cranial length of the male brachycranes is 178.0 mm, a value which is very similar to the average of male B1 crania from Area G (177.0 mm) and cemetery H stratum I from Harappa (compare Gupta et al., p. 94). Similarities to type B1 from Harappa are also observed concerning other craniofacial characters (e.g., the relatively broad-nose expressed by the high value of the nasal index or a certain degree of alveolar prognathism etc.).

It seems doubtful, however, whether it is a good solution to designate this skull type as “Alpine” type, a nomenclature used by Krogman for
similar skull types found at Tepe Hissar. The same is true of the conception “armenoid” used by Chatterjee and Kumar (1962) in the verbal combination “Alpino-armenoid” to designate a similar skull type from the post-Harappan site of Lothal. Especially this nomenclature is misleading, as it was coined for a racial type common in the mountain region of the Near East, which is characterized by a short head with very flat occiput (plan-occipital), while the occiputs of the brachycephales from Harappa and Sarai Khola are well rounded.

The numerically small long-headed (dolichocephalic) group with high orbits and narrow nose can be identified with the Mediterranean type A1 from Harappa, which has been found not only in the early cemetery R 37 but also in the post-Harappan cemetery H and Area G. However, one long- and narrow-headed, rugged and sturdy-built skull, with low and receding forehead, strongly marked glabellar region, protruding occiput (occiput en chignon) and a marked alveolar prognathism (Skull No. 23, Fig. 5) suggests the presence of the primitive type A, also designated also Proto-australoid, Veddoid, Dravidoid etc., (see above). Some of the features which are characteristic for this type are also observed in some other skulls.

As has been shown earlier this archaic type is not only common in cemetery R 37 from Harappa and the skeletal material from Mohenjodaro but also present in some specimen in the anthropological material from cemetery H.

Finally some dolichocranic or slightly mesocranic skulls of small absolute size and belonging to female individuals may be attributed to type A2 from Harappa, which are found mainly in cemetery H stratum I. However, it seems very doubtful whether it is justified to differentiate these small-headed skulls as separate group from type A1 with greater cranial dimensions, as the metrical differences between the two groups may be considered more as sexual than as typological differences.

The stature of Sarai Khola males being 167,8 cm is very close to the value calculated from the long bones from cemetery H, stratum II (170,7 cm), while the people of cemetery R 37 show a remarkable higher stature (175,7 cm). No data or only the stature of one male individual are available from Area G and cemetery H stratum I respectively, so that the comparison with this material is not possible.
As the anthropometric relationships, typological affinities are very scarce between the Sarai Khola material and the skeletal remains excavated in recent times from different cemeteries of the Gandhara Grave Culture in Dir and Swat. The typological composition of these prehistoric populations is quite different from the anthropological material of Sarai Khola and shows closer typological relationships to skeletal finds from Middle Asia, as has been shown by Bernhard (1967). A detailed analysis will be given in the final report where further prehistoric series from South and Middle Asia should be included.

V. DISCUSSION AND CONCLUSION

The preliminary analysis of the anthropological material from the prehistoric cemetery of Sarai Khola has brought to light a population, morphologically characterized by the prevailing of a round-headed anthropological type, which was found along with a numerically smaller long- and narrow-headed group. Both anthropological elements differ from each other not only by the proportions of the brain case of the skull but also concerning other morphological and metrical features, as has been shown in the preceding sections.

The comparison of these finds with the scarce prehistoric anthropological material available from Pak-Indian subcontinent till now suggests close morphological affinities to the skeletal material from the post-Harappan occupation of Harappa (cemetry H and area G) and the post-Harappan settlement of Lothal in Gujarat, where a round-headed population element was observed for the first time.

Due to the missing of any grave furniture, we do not at present know anything about the culture of the people of the cemetery of Sarai Khola. The same is true of a certain degree for the post-Harappan period of Harappa, especially the population present in the skeletons from Area G, of which even the burial customs are uncertain.

Thus archaeology cannot contribute very much in the present state to confirm the suggested morphological connections. The only archaeological data available both from Sarai Khola and cemetery H at Harappa are the burial customs, which are, however, quite different as has been shown by Halim (1968; chapter:- Place of Sarai Khola cemetery in the history of Pakistan). Nevertheless—according to Halim—“two skeletons
exposed in the eastern trench of cemetery H and published by M. S. Vats... are most identical with the skeletons exposed in the cemetery at Sarai Khola”. The anthropological connections between the material from Sarai Khola and Harappa may encourage archaeology in persuading these hints to link up Sarai Khola cemetery with other pre- and protohistoric cultures.

In the past most of the scholars were of the opinion, that the comparatively round-headed strain of the Pak-Indian population and especially the round-headed prehistoric elements who settled at Harappa after the decline of Indus-Civilization can be considered as immigrants, who probably mixed with the surviving autochthone long-headed element from Harappa.

This assumption has been advocated besides others in recent times by Sarkar (1964). According to this author, the short-headed element of Harappa is connected with similar skull finds from Tepe Hissar III, which were probably of ancient Scythian origin and arrived from Ukraine and Central Asia. In his opinion they migrated in different waves to India, where they are present especially in cemetery H stratum I and the human remains from Area G (Sarkar 1964, p. 94).

On first sight, the discovery of a distinct round-headed anthropological type at Sarai Khola, geographically situated between Harappa and Tepe Hissar, seems to support this theory, as these new findings can be considered as geographical links between the two centres of brachycephaly in South Asia.

In the light of modern anthropological research work it appears, however, premature to draw such far leading conclusions on the basis of this limited material standing at present at our disposal and especially on the basis of one single trait like the cranial index which in recent time for different reasons has lost very much of its importance for racial discrimination. The analysis of the prehistoric anthropological material available from Europe and Western Asia till now has clearly shown, that approximately from the 3 Mill. B.C., onwards a evolutionary trend in brachycephalic (round-headed) direction (designated as brachycranisation) can be observed, which starts from different and independent centres (compare Hemmer 1968).
In the same sense it is possible to assume, that the round-headed element discovered in the Pak-Indian subcontinent in the prehistoric cemeteries of Sarai Khola, Harappa and Lothal are not foreign immigrants but representatives of a special evolutionary strain of the autochthon and aboriginal population of the subcontinent. This assumption may be supported by the fact, that the brachycranic skulls found at Sarai Khola and Harappa show special morphological features (e.g., a certain degree of prognathism) which differentiate them from the round-headed skulls of other areas.

The final report, which is also including the skeletal remains uncovered during the second excavation season, and thus will be based on a broader material, may possibly help to solve these and other problems. In any case the anthropological material from Sarai Khola revealing for the first time a new prehistoric anthropological element in the northwestern corner of the subcontinent is of great importance for building up the racial history of Pakistan which may help to understand the cultural history of this area.

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*Maximum number of skulls.*
COINS OF THE EARLY MUSLIM PERIOD FROM BANBHORE

(Plates XXI—XXV. a)

by

Pervin T. Nasir

INTRODUCTION

On the national highway from Karachi to Hyderabad a narrow metalled road turns to the right at the 38th mile stone. If we travel on that road for about two miles, the scene is broken by the sight of an ancient fortress situated on the north bank of the Gharo Creek. This is the famous site of Banbhore, one of the earliest Muslim settlements in this sub-continent. Its location on an arm of the Arabian Sea made it an inland port of some importance and all available references lead us to identify it with the historic city of Debul which fell to the young Arab General, Muhammad bin Qasim in 712 A.C.

It was here that a new era dawned and the followers of Islam changed the course of history in the Indo-Pakistan sub-continent. At that time a Hindu Raja, Dahir with his capital at Debul, ruled the area. The Arab ships, which carried on a regular trade along the coast with countries bordering the Indian Ocean, passed through Debul. On one occasion, some Arab ships\(^1\) carrying gifts from the King of Ceylon for the Caliph were robbed while anchored at this port. Failing to get any redress from Raja Dahir, the Arab Governor of the Eastern Provinces of the Caliphate, Hajjaj bin Yusuf sent two punitive expeditions which failed. It was Muhammad bin Qasim who subdued Raja Dahir and Debul became a part of the Caliphate. Within a short time Muslim rule was further extended to the north upto Multan and firmly established there. During the Umayyad and Abbasid periods, a number of Arab cities, viz.,

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\(^1\) Beg, Qalich, Fredunbeg, Chach Nama, 1900, p. 71.
Mansura, Mahfooza, Nirun, and Alor were established and Arab coins found their way into the various towns and cities of this far eastern province of the Caliphate.

In an attempt to reconstruct the history of this important phase of early Muslim rule in this sub-continent, the Department of Archaeology began excavations\(^1\) at Banbhere in 1958. Since then valuable work has been carried out at the site and many antiquities have been uncovered. Among the most important of them are the coins which have yielded significant datable evidence about this period. The number of coins so far discovered at Banbhere runs into some thousands, but most of them are so badly corroded that they are totally undecipherable. However, those coins, in a good state of preservation, have been cleaned and studied. These may be classified as follows:—

I. Pre-Islamic Coins.

II. Coins of the Muslim Period.

The pre-Islamic coins do not fall within the purview of this paper and only the coins of the Muslim period discovered at Banbhere will be discussed here. Basically, they fall into two main categories as follows:—

1. Pre-Reform Coinage.
2. Post-Reform Coinage.

1. **Pre-Reform Coinage**

It is a well known fact that the Sassanian and Byzantine coins were commonly in circulation throughout the Caliphate before the introduction of the pure Arab coinage by Abdul Malik ibn Marwan in 696 A.C. The word “Bismillah”\(^2\) or “Allah” in Kufic characters was superimposed on these coins by the Arabs to indicate the authority of the Caliph. The pre-reform coins of the Muslim period may thus further be classified as:—

(a) Arab-Sassanian Coins.
(b) Arab-Byzantine Coins.

(a) ARAB SASSANIAN COINS

The term Arab-Sassanian has been used in respect of the pre-reform

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\(^1\) Pakistan Archaeology Number 1, 1964.

\(^2\) Walker John, Catalogue of the Arab-Sassanian coins, 1941.
coins of the Arabs which were struck after the Sassanian fashion, with a conventional portrait on the obverse and, usually, a Zoroastrian fire-altar with attendants on the reverse, with the addition of “Bismillah” or “Allah” on them. It is important to note that by keeping the coins of their predecessors or their copies in circulation, the Arabs had not done anything unusual. In those days, when means of communication were limited, it took time for the conqueror to assert his authority everywhere. People, used to a particular type of currency, were not easily persuaded to accept the change and therefore the same currency was kept deliberately in circulation. The Arabs in their time, followed this practice, and for a considerable period after their assumption of power Sassanian coins remained in circulation in the Eastern Provinces of the Caliphate. In fact, this tradition found its expression later, with some of the native currencies.

The Arab-Sassanian coins\(^1\) were in silver or copper but none in gold. The Sassanian ‘Drachm’, the unit of their silver coinage, maintained a uniform standard of weight from the time of Ardashir I (211-241 A.C.) until the last ruler of the dynasty (651 A.C.). Mordtmann,\(^2\) who weighed more than two thousand Sassanian ‘Drachms’, has given their average weight as 3.906 grm. The ‘Dirhams’ which were struck by the early Arab governors after the Sassanian fashion, have also an average weight which can be put at about the same figure. This fact was disputed by Zambaur\(^3\) as he appears to have mistaken the ‘Attic Drachm’ weighing 4.25 grm. for a ‘Sassanian Drachm’. At all events the Arab-Sassanian silver coins found at Banbhore confirm the description given by Mordtmann. A specimen\(^4\) of this type from the site has, on the obverse, the bust of a Sassanian ruler and a short legend in Pahlevi. On its reverse, is a fire-altar, the name of the mint and a date in the Yazdgird era. The name of the mint has been deciphered as Marv and the date as 21 Y.E. (652 A.C.). As mentioned above, the word ‘Bismillah’ is super-imposed over the Pahlevi legend on the obverse of the coin. In this connection, it is interesting to note that four languages, with their corresponding scripts, were employed to express the legend on Arab-Sassanian coins, namely Pahlevi, Ephthalite, Bukharan and Arabic.

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3. Article ‘Dirham’ in the Encyclopaedia of Islam.
Four silver coins in the same tradition, which may be classified as Indo-Sassanian, have also been discovered at Banbhore. They are in a poor state of preservation and do not appear to have any legend. On the obverse of one such coin is a blurred profile of a figure, while on the reverse is a crude representation of the Zoroastrian fire-altar. Owing to the distorted facial profile, this type of coin was commonly known as ‘Gadhaiya’. When these coins were first minted and how long they remained in circulation are questions difficult to determine, but their origin is attributed to the legendary Vikramaditya of Ujjain (441 A.C.).

(b) ARAB-BYZANTINE COINS

Within three years after the death of the Holy Prophet, Damascus, the great Syrian empire was conquered by the Muslims. Jerusalem was captured in the following year and, one after another the rich commercial centres of the Near-Eastern Provinces of the Byzantine Empire were annexed to the dominions of Islam. In the same way that the Sassanian coinage was adopted by the Arabs, so the Byzantine system of coinage current in that region was taken over. The legends on these coins were sometimes in Greek or Latin and sometimes in Pahlevi with Arabic inscription superimposed on them. They were struck after Byzantine models by the early Arab rulers and remained in circulation throughout the Caliphate until the reign of Abd al-Malik ibn Marwan. The Arab chroniclers, who have mentioned the early coinage, are unanimous in declaring that the gold coin of the Byzantine Empire set the standard for the earliest Umayyad ‘Dinar’ which appeared under Abd al-Malik and presumably struck at Damascus. The weight of the Byzantine gold ‘Solidus’ varied, though very little, during its long period of currency. It ranged between 60 grains and 70 grains. The average weight of the Arabic ‘Dinar’ was also about 65 to 66 grains which, later on, was made the fixed basis of the Muslim monetary system. The Arab-Byzantine coins are not so common at Banbhore. However, in the highly corroded collection, there are a few copper coins which may be described as imitation ‘folles’. This issue indicates degeneracy in the type and strongly suggests its considerable duration as a currency.

4 Wroth, catalogue of Imperial Byzantine coins in the British Museum, Vol. I.
5 Banbhore Museum, Accession No. 7011.
2. POST-REFORM COINAGE

The credit of reforming the Arab coinage goes to Caliph Abd al-Malik ibn Marwan (65-86 A.H./685-705 A.C.). When Abd al-Malik came to power, there was chaos and disruption in the dominions of Islam and he had to face many enemies. In Hijaz, Abdallah ibn Zubayr had established himself firmly as a rival Caliph, with his capital at Mecca and control as far as Kufa and Basra. The manner in which Abd al-Malik ibn Marwan consolidated his authority and crushed formidable opposition is a tribute to his masterly handling of the situation. With the loyalty and assistance of some able Generals, he not only regained the whole world of Islam, but added considerable areas to it. Among his great Generals, whose names also appear on the coins of that period, were Musa ibn Nusair, who carried the sword of Islam across North Africa into Spain; Al-Muhallab ibn Abi Sufra, who conquered the fanatic sectarianists of Iran, and last, but most renowned of them all, was Hajjaj ibn Yusuf, who was the main strength of the Umayyad Caliph and under whose direction the era of Islam was inaugurated in what are now the territories of West Pakistan.

The great reform in the Arab coinage by Caliph Abd al-Malik ibn Marwan is generally believed to be a reaction to the anti-Muslim policy of the Byzantine Emperor, Justinian1 II, who ruled about the same time as Abd al-Malik. The historical background has been described by Walker as follows:—

"On the papyri exported to Byzantium from Egypt, then in Muslim hands, the protocols, or official headings, written on them to guarantee their authenticity, came to be written not only in Greek but also in Arabic, with phrases proclaiming inter alia that Muhammad was Allah's Apostle and that there was no god except Allah, e.g.,

OYK ECTI OEOC EI MH O OEOC MONOC MAAMET ATTOCTOAOC OEOY

لانون اله الا الله وحده محمد رسول الله

This displeased the Christians, who threatened to retaliate by placing legends abusing Muhammad on the gold solidi from Byzantium, which constituted the legal currency amongst the Arabs of Egypt. A spirited exchange of letters between the Emperor and the Caliph

1 Walker, John—Catalogue of the Arab-Sassanian coins, 1941.
led to a breach of diplomatic and trade relations, which eventually brought about the striking by the Caliph of his own dinars with orthodox Islamic legends."

Of the large collection of silver and copper coins of this period found at Banbhore, only a few have been deciphered. Two silver coins in this collection belong to the Sixth Umayyad Caliph Al-Walid ibn Abd al-Malik (86-96 A.H./705-715 A.C.). Both were issued in 95 A.H. although from two different mints, namely al-Taimara and Ardashir Khurra. The obverse of the coins bears

لا الله الا الله وحده لا شريك له

Margins:

بسم الله غرب هذا الدرهم باد دحير خره في سنه خمس وستعين

while the reverse contains Surah Ikhlas.

محمد رسول الله ارسله بالسلام وودين

Margins:

الحق لبديل الرحمن على الدين كله ولو كره المشركين

Another remarkable specimen is a silver coin of the tenth Umayyad Caliph Hisham, ibn Abd al-Malik (105-125 A.H./724-743 A.C.), which was minted at Wasit. According to the usual practice of that period, it does not give the name of the Caliph. The obverse of the coin, however, bears the Kalima. The coin was minted at Wasit in 124 A.H. and the reverse contain Surah-i-Ikhlas and محمد رسول الله ارسله . Other examples of the coins of this period have been given in the Appendix.

The average weight of the Post-Reform 'Dinar', called a 'mithkal' was about 65 to 66 grains. This was made the fixed basis of the Arab monetary system. The relationship of the 'Dirham' to the mithkal was 10 to 7. The copper coins 'Fulus', were looked upon as token currency and there was no fixed weight for them. Obviously, they provided small change for petty transactions.

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1 Banbhore Museum, Accession Nos. 3922 and 1990.
2 Banbhore Museum, Accession No. 3922 (a).
3 Banbhore Museum, Accession No. 4246.
3. COINS OF THE ABBASID PERIOD

The Umayyad dynasty was succeeded by the Abbasids in 750 A.H. This change was hailed by the Muslims as representing the true conception of the Caliphate against the secular approach of the Umayyads. The Caliph was now surrounded by men well-versed in the canon law, whom he patronized and from whom he sought advice on matters of state. One remarkable difference noticeable in this change was that the Umayyad Empire was primarily Arab in character while the Abbasids were more international in outlook. The Arabs formed only one of the many component races in their dominions. The Abbasid era was opened by Abu-al-Abbas, though the new dynasty was firmly established by Al-Mansur (754-775 A.H.). From then onwards, non-Arab, particularly Persian,\(^1\) influences became more apparent distinguishing the Abbasid regime by the cultivation of sciences and scholarly pursuits. Arabic, however, continued to remain the state language. The legends on the coins of this period are invariably in Arabic.

The Abbasid coins found at Banbhore are beautifully inscribed with Arabic legends partly inside a circle and partly around the rim. These coins usually contain the ‘Kalima’ on the obverse with mint and date in the margins. The reverse of the coin has a verse from the Holy Quran and the name of the Caliph with titles. The Banbhore collection includes one gold and a number of silver and copper coins belonging to this period. The gold coin\(^2\) which belongs to the ninth Abbasid Caliph Abu Jaffar Harun-al-Wasiq Billah (842 to 847 A.C.) minted in Egypt in 229 A.H. (844 A.C.), is of particular importance. It was found on the lime-plastered floor of a burnt brick house in the northern sector of the citadel. The obverse of the coin bears the following:

لا الله الا الله وحدة لاشريك له

Margins: (Inner)

بسم الله ضرب هذا الدين الله لله وتمرين دمائن

Margins: (Outer)

الله الا مرن بعد ويبندويون الاموين بو الله

The reverse has:

الله محمد رسول الله الوافدق بالله

---

\(^1\) Hitti, History of the Arabs, 1951.

\(^2\) Banbhore Museum, Accession No. 90.
In the collection of this period, two silver coins also deserve our special attention. One of them belongs to the seventh Abbasid Caliph al-Mamun (813 to 833 A.C.). It was struck at Samarkand in 196 A.H. The reading of the coin is as follows:

Obverse:

لا الله وحده لا شريك له

Margins:

بسم الله غرب هذا الدرهم بعثني سرقة سنه ست وستعين ومائتين

Reverse:

الله محمد رسول الله وامير المؤمنين فضل

Margins:

محمد رسول الله ارسله بالهدی و دین الحق لاظهره على الدين كله ولو كره المه可愛い

It will be observed from the above that, under the name of the Caliph, his titles “Amir al-Mominin” and “Al-Fadl” have been given. It is intriguing to note the title of “Amir al-Mominin” on this coin which appears to have been minted before the assassination of the Caliph’s elder brother al-Amin in 198 A.H. when he could not possibly be accepted as undisputed ruler of the Islamic State.

Another silver coin belongs to the fifteenth Abbasid Caliph al-Mutamid (870 to 892 A.C.). The obverse of the coin, which is badly defaced, gives 61 A.H. as its date. But on the reverse, the name of the Caliph is clear and, therefore, it would be reasonable to read the date on the coin as 261 A.H. and not 61 A.H., the numeral (2) having been defaced. In its present condition, the obverse of the coin contains the following:

The reverse has:

والدداه بالبصرة وه

Margin: Illegible.

The copper coins in the Banbhore collection have been described in

1 Banbhore Museum, Accession No. 4284.
3 Banbhore, Museum, Accession No. 4246.
detail in the appendix. They include some apparently unique but only partially preserved specimens which are as follows:—

Obverse:
لا الله وحدك وحده

Reverse:
محمد رسول الله

Margin:
غرب الفاس

One copper coin. The coin possibly belongs to the 25th Caliph.  

Obverse:
الله ناصر أحمد

Reverse:
الله رسول الله or مرن

One copper coin minted at Wasit. The obverse and reverse of the coins are as under:—

Obverse: Within a double circle
لا الله وحده وحده

Reverse: Within a circle.
محمد رسول الله

Margins:
لا غص.... الواسط اللذي....

بسم الله ضرب هذا الفاس بواسطة عشرو مئة

One copper coin possibly of Caliph Harun al-Rashid (786-809 A.C.).  

Obverse: Within a circle.
لا الله وحده وحده

Reverse: Rusted but within a circle.
محمد رسول الله هرور or هرو

One copper coin possibly of Yahyah Barmik (?)

Obverse:
لا الله وحده وحده

Reverse: With an incomplete circle
لا الله وحده وحده

---

1 Banbhore Museum, Accession No. 822.
3 Banbhore Museum, Accession No. 4271.
4 Banbhore Museum, Accession No. 6155.
5 Banbhore Museum, Accession No. 6525.
4. COINS OF THE LOCAL GOVERNORS AND CHIEFTAINS

The region of Sind upto Multan was the eastern-most province of the Caliphate. But, according to the Arab chroniclers, the frontiers of this Province were never stable as the Governors “kept fighting the enemy and seizing whatever came into their hands, and subduing the places in the neighbourhood whose inhabitants rebelled”. In 871 A.C., the Abbasid Caliph handed over the Province to Yaqub-ibn-Lais, the Saffarid leader. This dynasty was soon replaced by the Samanids in 900 A.C. But neither the Saffarids nor the Samanids could exercise effective control over this remote Province of their territory, and soon after it was divided between the two almost independent principalities of Mansura in the south and Multan in the north. This is confirmed by the accounts left to us by Khurdadbah (260 A.H./912 A.C.), Masudi (943 A.C.), Istakhri (300-309 A.H./951 A.C.) and Ibn Haukal (331-366 A.H./976 A.C.). The names of the Arab Governors and independent local dynasties who ruled in the early phase of Muslim domination of this region are as follows:—

(a) Governors of the Umayyads:
8. Amr ibn-Muhammad ibn-al-Qasim (Founder of Mansurah).
10. Al-Mansur ibn-Jumhur (749 A.C.).

(b) Governors of the Abbasids:
1. Abd ur-Rahman ibn-Muslim (751 A.C.)
2. Al-Masuuyib ibn-Zuhair (751 A.C.)
3. Musa ibn-Kab (751-758 A.C.)

1 The Arabs in Sind—Journal, Sind Historical Society, Vol. III.
13. Daud ibn-Daud (800 A.C.).
18. Yaqub ibn-Lais (870 A.C.). Died in 879 A.C.

INDEPENDENT DYNASTIES

(a) Dynasties of Multan:
1. Arab Quraishite Dynasty—The Ghalibs (942-976 A.C.).
2. Qarmatian Dynasty founded by Jhalan ibn Shaiban.
3. Afghan Lodi Dynasty:
   Shaikh Hamid Lodi (963 A.C.)
   Nasir Abdul Fath Daud (1005-1010 A.C.).

(b) Dynasties of Mansurah:
1. Arab Quraishite Habbari Dynasty (912-976 A.C.).
2. Qarmatians and Sumras (1025-1362 A.C.).
3. Sammas (1290 to 1521 A.C.).

The coins found at Banbhore issued by the local Governors and the Chieftains of Sind are mostly in copper. These coins may be classified in four categories: those with (a) the simple religious legends (b) coins bearing a star and a legend (c) coins containing small dots and semi-circles (d) coins bearing a flower in the centre. A few important coins belonging to these categories have been described below while a detailed list appears in the appendix.

---

1 Billimoria, N. M. The Arabs in Sind, 1937.
(a) The simple religious legends:

Obverse:¹
لا اله الا ا لله وحده لا شريك له

Reverse:
محمد رسول الله

(b) Coins bearing a Star and a legend:

Obverse:²
لا اله الا ا لله وحده لا شريك له

Reverse: Central device is a hexagonal figure, enclosed by a circle. Around, there is a legend but almost defaced
Margin...........

(c) Coins containing small dots and Semi-circle:

Obverse:³ عال
Incomplete double circle enclosing dots within

Reverse: ﷺ

(d) Coins bearing flower in the centre:

Obverse:⁴ محمد
Legend arranged around a four-leaved flower. Two crescents observed in the above.

Reverse:
الصل عليك الرحمن (عبد الرحمن) الله

The local Governors and the Chieftains had the right of issuing 'fulus'. Before the reform, the Umayyad governors could also strike 'Dirhams' with their own names, without infringing the Caliph's prerogative of minting.

¹ Banbhore Museum, Accession No. 4271.
² Banbhore Museum, Accession No. 6189.
³ Banbhore Museum, Accession No. 225.
⁴ Banbhore Museum, Accession No. 4631.
The star was a very special and discriminative symbol which attained permanent recognition in and around the Province. The device may be particularly observed on Abdur Rahman's coins\(^1\) but in a slightly modified form.

Early\(^2\) Arab travellers to this sub-continent have given information about the currency which was in circulation in Sind. Among other pieces used in commerce, they have specially mentioned 'Dirhams' which took a prominent place and were reckoned as equal in value to 1\(\frac{1}{2}\) of the ordinary coins of the period.

The method of preparing dies and striking coins appears unchanged throughout the period. The presence of honey-combed clay slabs at the site, which have been found in association with charcoal, ashes and fragments of metal, is highly revealing. The fragmentary copper pellets, which fit in the hollows of these slabs and to which bits of residue copper, have been found adhering, suggest the technique which was employed for minting the coins at that time. These honey-combed clay moulds provided pellets of uniform size and weight from which small size coins were produced in the dies by a heavy hammer blow. It can reasonably be concluded that small silver coins were also produced in the same manner.

The coins which have been unearthed at Banbhore thus provide us with a firm basis on which the chronology of this earliest Muslim settlement in the sub-continent can be built up. Through this material evidence, we also know a great deal about the economic condition of the region, its trade relations and the entire sequence of its domination by various rulers and dynasties from the period of Umayyad Caliphate down to its last phase of its history.

\(^1\) Journal, Sind Historical Society Vol. III.
\(^2\) Billimoria, N. M. The Arabs in Sind (Paper read before the Sind Historical Society in 1937).
5. APPENDIX

EARLY MUSLIM COINS FOUND AT BANBHORE

<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td>PRE-REFORM COINAGE</td>
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<tr>
<td>1.</td>
<td>AR</td>
<td>21 Y.E.</td>
<td>Arab - Sassanian Coins.</td>
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<tr>
<td></td>
<td></td>
<td>(652 A.C.)</td>
<td>Obverse: Bust of a Sassanian Emperor and inscriptions in Pahlevi and Kufic (illegible).</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Sassanian fire altar with attendants. Minted at Marv. Date in Yazdgird era in Pahlevi.</td>
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<td></td>
<td></td>
<td>W. 1.950 G.</td>
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<td>S. 1.1 Dia.</td>
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<td></td>
<td>2. AR</td>
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<td></td>
<td>Reverse: Sassanian fire altar with attendants.</td>
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<td>W. 1.570 G.</td>
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<td>S. 1.0 Dia.</td>
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<td>3. AR</td>
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<td></td>
<td></td>
<td></td>
<td>Reverse: Sassanian fire altar with attendants.</td>
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<td></td>
<td></td>
<td></td>
<td>W. 1.320 G.</td>
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<td></td>
<td>S. 1.0 Dia.</td>
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<tr>
<td>No.</td>
<td>Metal</td>
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<td>4.</td>
<td>AR</td>
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<td>Obverse: Bust of a Sassanian Emperor—super-imposed with אל&lt;br&gt;Reverse: Attendants—inscription illegible.&lt;br&gt;W. 0.420 G.&lt;br&gt;S. 0.4 Dia.</td>
</tr>
<tr>
<td>5.</td>
<td>AE</td>
<td></td>
<td><em>Arab-Byzantine Coins.</em>&lt;br&gt;Obverse: אל Enclosed within small size circles.&lt;br&gt;Reverse: Six sided stars in the centre אל כוכב in Kufic.&lt;br&gt;W. 0.980 G.&lt;br&gt;S. 0.8 Dia.</td>
</tr>
<tr>
<td>6.</td>
<td>AE</td>
<td></td>
<td>Obverse: אל Enclosed within small size circles.&lt;br&gt;Reverse: Six sided stars in the centre אל כוכב in Kufic.&lt;br&gt;W. 0.980 G.&lt;br&gt;S. 0.8 Dia.</td>
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<td>7.</td>
<td>AE</td>
<td></td>
<td>Obverse: אל Enclosed within small size circles.&lt;br&gt;Reverse: Six sided stars in the centre אל כוכב in Kufic.&lt;br&gt;W. 0.980 G.&lt;br&gt;S. 0.8 Dia.</td>
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<td>No.</td>
<td>Metal</td>
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<tr>
<td>8.</td>
<td>AE</td>
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<td>Four coins, rather thick in gauge. The coins are known as Gadhaiya and are Indo-Sassanian type.</td>
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<td>W. 3.885 G.</td>
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<td>S. 0.8 Dia.</td>
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<td>9.</td>
<td>AE</td>
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<td>Obverse: محمد within a square and four dots.</td>
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<td></td>
<td>Reverse: Obliterated.</td>
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<td></td>
<td>W. 1.320 G.</td>
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<td>S. 0.7 Dia.</td>
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<td>10.</td>
<td>AE</td>
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<td>Obverse: محمد الله</td>
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<td>Reverse: Corroded.</td>
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<td>W. 0.920 G.</td>
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<td>S. 0.7 Dia.</td>
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**POST-REFORM COINAGE OF THE UMAYYAD PERIOD**

<p>| 11. | AR    |              | <strong>Walid I</strong> <em>(86 - 96 A.H.)</em> <em>(705-715 A.C.)</em>                               |
|     |       |              |                                                                             |
|     |       |              | Obverse: لا الله إلا الله وحده لا شريك له                                      |
|     |       |              |                                                                             |
|     |       |              | بسم الله ضرب هذا الدرهم بارضیر                                               |
|     |       |              | خر و خمس و أضع <em>(95 A.H.)</em>                                                   |
|     |       |              |                                                                             |
|     |       |              | Reverse: قل هو اقتفن الله الصمد لم يلد ولم يولد ولم يكن له كفنا أحد               |
|     |       |              |                                                                             |
|     |       |              | محمد رسول الله صلى الله عليه وسلم دين الحق ليظهر                          |
|     |       |              |                                                                             |
|     |       |              | W. 1.325 G.                                                                  |
|     |       |              | S. 1.0 Dia.                                                                  |</p>
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<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
<th>Obverse</th>
<th>Margins</th>
<th>Reverse</th>
<th>Margins</th>
<th>W.</th>
<th>S.</th>
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<td><strong>لا اله واحده لا شريك له</strong></td>
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<td><strong>بسم الله هرب هذا الد رهم</strong></td>
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<td><strong>بالتميرة في سنه خمس وتسع</strong></td>
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<td><strong>الله احدث الله الصمد لم يلد</strong></td>
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<td><strong>مثيرب</strong></td>
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<td><strong>W. 1.710 G.</strong></td>
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<td><strong>S. 1.0 Dia.</strong></td>
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<tr>
<td>13.</td>
<td>AR</td>
<td>124 A.H.</td>
<td><em>Hisham bin-Abdul Malik.</em> (105-125 A.H.) (724-743 A.C.)</td>
<td><strong>Obverse:</strong> Kalima.</td>
<td><strong>Mint:</strong> Wasit.</td>
<td><strong>Date:</strong> 124 A.H.</td>
<td><strong>Margins:</strong> نورا رسول الله ارسله</td>
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<td><strong>Reverse:</strong> Surah-i-Ikhlas.</td>
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<td><strong>W. 1.230 G.</strong></td>
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<td><strong>S. 0.9 Dia.</strong></td>
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<td>14.</td>
<td>AR</td>
<td></td>
<td></td>
<td><strong>Obverse:</strong> Field (within a circle)</td>
<td><strong>Legend in margin which is also surrounded by a circle (with five annulets or small circular marks—four clear and one not distinct).</strong></td>
<td><strong>Margins:</strong> نورا رسول الله ارسله بالهدى ودين الحق ليظهره على الدين كله ولو كره المشركون</td>
<td><strong>The above Quranic verses are of common occurrence in the coins of the Umayyad Caliphs and</strong></td>
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<td>are sometimes called the Umayyad symbols by Numismatists.</td>
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<td>15.</td>
<td>AE</td>
<td></td>
<td>Reverse: Kalima.</td>
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<td>Margins: بسم الله ضرب الدرهم بواسط ستة ربع وعشرين ميلليه</td>
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<td>W. 2.300 G.</td>
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<td></td>
<td></td>
<td>S. 1.0 Dia.</td>
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<tr>
<td>16.</td>
<td>AE</td>
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<td>Obverse: محمد رسول الله</td>
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<td></td>
<td>Reverse: Obliterated.</td>
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<td></td>
<td></td>
<td>W. 1.320 G.</td>
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<td>S. 0.7 Dia.</td>
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<td>17.</td>
<td>AE</td>
<td></td>
<td>Obverse: Almost defaced.</td>
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<td></td>
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<td>Reverse: Flower in the centre.</td>
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<td>W. 1.770 G.</td>
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<td>S. 0.5 Dia.</td>
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<td>18.</td>
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<td></td>
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<td>An incomplete circle all round.</td>
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<td></td>
<td>Reverse: A four petal flower, probably with محمد رسول الله</td>
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<td>W. 1.220 G.</td>
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<td>19.</td>
<td>AE</td>
<td></td>
<td>Obverse: Legend and arrangement same as above. Reverse: محمد رسول الله Last line is incomplete.</td>
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<td>W. 1.820 G. S. 0.7 Dia.</td>
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<td>20.</td>
<td>AE</td>
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<td>Obverse: الله محمد على رسول الله Reverse: الله بعو علي</td>
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<td>W. 0.950 G. S. 0.5 Dia.</td>
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<td>W. 1.230 G. S. 0.6 Dia.</td>
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<td>22.</td>
<td>AE</td>
<td></td>
<td>Obverse: لا اله Reverse: Defaced.</td>
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<td>W. 1.250 G. S. 0.7 Dia.</td>
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<td>W. 1.670 G. S. 0.7 Dia.</td>
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<td>24.</td>
<td>AE</td>
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<td>Obverse: لا إله إلا الله وحده لا شريك له</td>
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<td>Reverse: Indecipherable.</td>
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<td>W.  2.260 G.</td>
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<td>S.   0.8 Dia.</td>
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<td>25.</td>
<td>AE</td>
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<td>Obverse: Inscription within an incomplete circle</td>
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<td>محمد رسول الله</td>
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<td>4th line incomplete probably صفر</td>
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<td>W.  1.770 G.</td>
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<td>S.   0.7 Dia.</td>
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<td>Obverse: محمد رسول الله عصر</td>
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<td></td>
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<td></td>
<td>Reverse: Within an incomplete circle بَتَّالِهُ عُمروُهُ النصر</td>
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<td>W.  2.60 G.</td>
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<td>S.   0.7 Dia.</td>
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<td>27.</td>
<td>AE</td>
<td></td>
<td>Obverse: لا شريك له (لا شريك له)</td>
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<td>Reverse: Indecipherable.</td>
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<td>W.  1.380 G.</td>
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<td>S.   0.8 Dia.</td>
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</tbody>
</table>
| 28. | AE    |      | Obverse: زهد محمد رسول الله  
Reverse: Circular line at the top وله الملك وال أمرش  
W. 1.370 G.  
S. 0.6 Dia.  |
| 29. | AE    |      | Obverse: Within double circle Kalima.  
Reverse: Central device same as above.  
Margins: سمحة الله عنا امرسه  
W. 0.580 G.  
S. 0.5 Dia.  |
| 30. | AE    |      | Obverse: Within a circle الله  
Reverse: Legend completely obliterated.  
W. 0.760 G.  
S. 0.6 Dia.  |
| 31. | AE    |      | Obverse: A small crescent and an incomplete circle. الله وله  
The third line obliterated.  
Reverse: محمد رسول الله  
W. 1.800 G.  
S. 0.7 |
<table>
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<th>No.</th>
<th>Metal</th>
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<tr>
<td>32.</td>
<td>AE</td>
<td></td>
<td>Umar II ibn Abdul Aziz ibn Marwan</td>
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<td></td>
<td></td>
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<td>لا الله إلا الله</td>
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<td>وحده لا شريك له</td>
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<td></td>
<td>الا بير عمر</td>
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<td>Reverse: Completely obliterated.</td>
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<td>W. 0.850 G.</td>
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<td>S. 0.8 Dia.</td>
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<td>33.</td>
<td>AE</td>
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<td>Obverse:</td>
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<td>الله وحده</td>
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<td></td>
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<td></td>
<td>لا شريك له</td>
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<td></td>
<td>الا بير عمر</td>
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<td>Reverse: Within a circle</td>
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<td>محمد رسول الله</td>
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<td></td>
<td>The last line is illegible. Probably it reads:</td>
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<td>ابیر عمر</td>
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<td>W. 1.665 G.</td>
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<td>S. 0.8 Dia</td>
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<tr>
<td>34.</td>
<td>AE</td>
<td></td>
<td>Hisham bin Abdul Malik (105-125 A.H.) (724-743 A.C.)</td>
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<td></td>
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<td>Obverse:</td>
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<td>لا الله الا</td>
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<td>شريك</td>
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<td></td>
<td></td>
<td></td>
<td>لا لا within a circle. Outer circle contains an</td>
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<td></td>
<td></td>
<td></td>
<td>inscription which is indistinct.</td>
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</table>
35. **AE**

**Obverse:** Within a circle.

(محمد
لا اله الا
الله وحده
لاشتر(ليك له)

Margins: Indistinct

Reverse: Obliterated.

W. 1.70 G.

S. 0.7 Dia.
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<td>36.</td>
<td>AJ</td>
<td></td>
<td>COINS OF THE ABBASID PERIOD</td>
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<td></td>
<td></td>
<td></td>
<td><em>Abu-Jasfar Harun al Wasiq Billah.</em></td>
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<td>(227-232 A.H.) (842-847 A.C.)</td>
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<td></td>
<td></td>
<td>Obverse: لا الله إلا الله</td>
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<td></td>
<td>وحده</td>
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<td></td>
<td>لاشريك له</td>
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<td>Rightward projection of the اب to be noticed.</td>
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<td>Margin: <em>(Inner)</em> بسم الله ضرب هذا الدينار بعسنته</td>
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<td></td>
<td>تسعة وعشرين ومائين</td>
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<td>Margin: <em>(Outer)</em> لا الله</td>
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<td>الا مل الله</td>
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<td>من قبل ومن بعد</td>
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<td>Reverse: محمد رسول الله النافع بات الله</td>
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<td>Margins: محمد رسول الله ارسله بالهدي و دين</td>
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<td>الحق لينظره على الدين كله ولو كره المشركون</td>
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<td>37.</td>
<td>AR</td>
<td>196 A.H.</td>
<td><em>Al-Mamun.</em> (813-833 A.C.)</td>
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<td>Obverse: لا الله إلا الله</td>
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<td></td>
<td>وحده</td>
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<td>لاشريك له</td>
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<td>Margin: بسم الله ضرب هذا الدرهم</td>
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<td>بعسنته سرهت: سنه تسعم وبنى</td>
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<td>Reverse: محمد رسول الله</td>
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<td>مما أرده الا مل المامون</td>
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<td>أمير المومنين الفضل الله</td>
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<td>Margins: محمد رسول الله ارسله بالهدي و دين</td>
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<td>الحق لينظره على الدين كله ولو كره المشركون</td>
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</table>
| 38. | AR    | *Al-Mehdi.* (775-785 A.C.) | Obverse:  
المهدى  
عبدالله  
نامر  
Reverse: Obliterated.  
W. 0.420 G.  
S. 0.4 Dia. |
| 39. | AR    | *Al-Mutamid Allah.* (870-892 A.C.) | Obverse: 2-4 lines  
محمد رسول الله  
5th line المكتنف بالله  
Reverse:  
ولي  
الدولة  
بالبصرة  
Margins: Illegible.  
W. 1.710 G.  
S. 1.0 Dia. |
| 40. | AE    |  | Obverse:  
لاه الا الله  
وحده  
Reverse: Not distinct.  
W. 1.70 G.  
S. 0.7 Dia. |
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| 41. | AE    |      | Obverse: لا الله إلا
      |       |      | اﷲ وحده
<pre><code>  |       |      | لاشريك له |
  |       |      | Reverse: محمد رسول اﷲ |
  |       |      | Margins: ضرب الفلس |
  |       |      | W. 2.240 G. |
  |       |      | S. 0.9 Dia. |
</code></pre>
<p>| 42. | AE    |      | Obverse: محمد |
|       |      | رسول |
|       |      | اﷲ |
|       |      | Reverse: Indecipherable. |
|       |      | W. 1.800 G. |
|       |      | S. 0.7 Dia. |
| 43. | AE    |      | Obverse: محمد |
|       |      | رسول |
|       |      | اﷲ |
|       |      | Reverse: Indecipherable. |
|       |      | W. 1.820 G. |
|       |      | S. 0.7 Dia. |</p>
<table>
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<th>Description</th>
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</table>
| 44. | AE    |      | Obverse: 

الله
اللهم
أحمد

or

مرون
ناصر


W. 1.200 G.
S. 0.6 Dia.

<table>
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<tr>
<th>45.</th>
<th>AE</th>
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<th>Very similar to the S. No. 44.</th>
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<td>W. 1.370 G.</td>
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<td>S. 0.7 Dia.</td>
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</tbody>
</table>

| 46. | AE    |      | Obverse: 

سورة
محمد

Reverse: Obliterated.

W. 1.900 G.
S. 0.7 Dia.

| 47. | AE    |      | Obverse: 

لا إله إلا الله
وحده لا شريك له
جعفر

Reverse: 

محمد
رسول
الله

W. 1.20 G.
S. 0.8 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Dates</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.</td>
<td>AE</td>
<td></td>
<td>Obverse: بالا</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Indecipherable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.310 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3 Dia.</td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>AE</td>
<td></td>
<td>Obverse: With a double circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا الله الا الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>وحده لا شريك له</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Within a circular</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>مسنت سط 2 عصرود</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.450 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.4 Dia.</td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>AE</td>
<td></td>
<td>Obverse: With a circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الا الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>وحده</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: With a circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>—who is the caliph</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لعمر مصر عصرة مصرين</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Margins:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>مالا الله مطامر</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الافتخار</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.35 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.9 Dia.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
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<td>-------------</td>
</tr>
</tbody>
</table>
| 51. | AE    |      | Obverse: 

الله 
ارا ط 
لمک 
Reverse: مک (دمحمد) |

W. 0.450 G.  
S. 0.4 Dia. |

52. | AE    |      | Muhammad bin Barmik. 

Obverse: 
لا اله الا الله  
ولا شريك له |

Reverse: Legend in the margin around the central decoration 
 الله مما امرك  
لا مسمز لا ادمک  
Name of the Amin is very indistinct. It may be محمد بن برمك or Mohammad b. Yazid. Two words coming after are illegible. 
W. 2.20 G.  
S. 0.8 Dia. |

53. | AE    |      | Harun-al-Rashid. (766-809 A.C.) 

Obverse: Within a circle 
لا اله الا الله  
وحده لاشريك له |

Reverse: Rusted, within a circle. 
محمد رسول  
الله  
هورون  
W. 1.430 G.  
S. 0.7 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.</td>
<td>AE</td>
<td></td>
<td><strong>Harun-al-Rashid. (766-809 A.C.)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse: With a single circle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا لله الا الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>وحده لا شريك له</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: With double circle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>هرون</td>
</tr>
<tr>
<td></td>
<td>W.</td>
<td>1.320 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.</td>
<td>1.0 Dia.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| 55. | AE    |      | Obverse: Legend very indistinct.  |
|     |       |      | Centre: لا لله الا الله وحده  |
|     |       |      | لا شريك له  |
|     |       |      | Margins: لم  |
|     |       |      | ....  |
|     |       |      | Reverse: With double circle.      |
|     |       |      | محمد  |
|     |       |      | رسول الله  |
|     |       |      | لا  |
|     |       |      | Margins: Illegible.                |
|     | W.    | 3.850 G. |  |
|     | S.    | 0.9 Dia. |  |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 56. | AE    |      | Obverse: Rusted and damaged.  Legend indistinct.  
Centre: لا الله الا الله  
وحده لأشريك له  
Margins: Illegible.  
Reverse: Rusted, damaged and legend more indistinct.  
Centre: محمد رسول الله  
صلی الله  
Margins: Illegible.  

W. 1.340 G.  
S. 0.8 Dia. |

| 57. | AE    |      | Obverse: Damaged.  
لا الله الا الله  
وحده لأشريك له  

Reverse: Within an incomplete circle.  
محمد رسول الله  
The fourth line illegible.  

W. 1.200 G.  
S. 0.5 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>58.</td>
<td>AE</td>
<td></td>
<td><em>Al-Mehdi.</em> (775-785 A.C.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse: Completely obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Within a circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>صلى الله عليه وسلم</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>المهدي (المهدي)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>العلامة (العلامة) امرأئي ماله</td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. 1.490 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. 1.0 Dia.</td>
<td></td>
</tr>
<tr>
<td>59.</td>
<td>AE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obverse: Damaged and illegible.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا الك</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الك</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reverse: Completely obliterated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. 1.490 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. 1.0 Dia.</td>
<td></td>
</tr>
<tr>
<td>60.</td>
<td>AE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obverse: لا الله الا الله الملك</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>للحق .... رسول</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The third and fourth lines are indistinct. However, it seems that it is identical to S. No. 53.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Reverse:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>بركت ..</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The word بركت in the fourth line is clear. The rest is illegible.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. 1.320 G.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>S. 0.6 Dia.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<td>-------------</td>
</tr>
<tr>
<td>61.</td>
<td>AE</td>
<td></td>
<td><strong>Al-Mamun.</strong> (786-833 A.C.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Obverse:</strong></td>
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<td></td>
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<td></td>
<td>لا الا الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الا اسمه</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>النا (المدون)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong> Almost defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 1.55 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>S.</strong> 1.1 Dia.</td>
</tr>
<tr>
<td>62.</td>
<td>AE</td>
<td></td>
<td><strong>Musa Ibn Kab.</strong> (751-758 A.C.)—</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Obverse:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong> Defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>On the right, a semi-circular line is noticed as that is just closing the letter, we do not find any traces of letter مم so as to say with certainty that it could be موسى</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 0.220 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>S.</strong> 0.5 Dia.</td>
</tr>
<tr>
<td>63.</td>
<td>AE</td>
<td></td>
<td><strong>Obverse:</strong> With an incomplete circle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا اله الا (الله)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لملك الحق</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله موسى</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong> Almost defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا د مك</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 1.255 G.</td>
</tr>
<tr>
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<td></td>
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<td><strong>S.</strong> 1.0 Dia.</td>
</tr>
<tr>
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<td>Description</td>
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</tr>
<tr>
<td>64.</td>
<td>AE</td>
<td></td>
<td><em>Hisham bin Umru.</em> (757-758 A.C.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لاِ اللهُ الاَّ لَهُ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>وَحْدَهُ لاَ شَرِيكَ لِهُ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Central device is by hexagonal figure enclosed by a circle. Around them is legend, but almost defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Margins:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الْعِمْرُ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Traces of الْعِمْرُ are recognisable. It seems to be another specimen of Amru. The Governor of Sind under second Abbasid Caliph Al-Mansur (754-775 A.C.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 3.670 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 1.0 Dia.</td>
</tr>
<tr>
<td>65.</td>
<td>AE</td>
<td></td>
<td>Obverse: Same as above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Central device alongwith the circle recognisable. Marginal legend obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.310 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.5 Dia.</td>
</tr>
<tr>
<td>66.</td>
<td>AE</td>
<td></td>
<td>Obverse: Obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Central hexagonal figure and the circle recognisable. Marginal legend also obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 4.40 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.8 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
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</tr>
<tr>
<td>67.</td>
<td>AE</td>
<td></td>
<td><strong>Obverse:</strong> لا  إلا الله وحده لا شريك له</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Margins:</strong> Indecipherable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong> Pentagonal star inside a dotted circle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Margins:</strong> ما امرله الا مير هشامه اعزا الله عمرو</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 4.180 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>S.</strong> 1.0 Dia.</td>
</tr>
<tr>
<td>68.</td>
<td>AE</td>
<td></td>
<td><strong>Obverse:</strong> لا  إلا الله وحده لا شريك له</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong> Pentagonal star in the field. Inscription indecipherable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 3.750 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>S.</strong> 1.0 Dia.</td>
</tr>
<tr>
<td>69.</td>
<td>AE</td>
<td></td>
<td><strong>Obverse:</strong> Defaced. لسلسله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Reverse:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>W.</strong> 0.420 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>S.</strong> 0.3 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
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<td>---------------------------------</td>
</tr>
<tr>
<td>70.</td>
<td>AE</td>
<td></td>
<td><em>Hydar-ibn-Kaus.</em> (837 A.C.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>حـيـدـر</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.405 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
</tbody>
</table>

| 71. | AE    |            | *'Ahmad.*                       |
|     |       |            | Obverse:                        |
|     |       |            | يـه                           |
|     |       |            | Possibly                        |
|     |       |            | رسول الله                      |
|     |       |            | Reverse: Within an incomplete circle.|
|     |       |            | Apparently                      |
|     |       |            | لله الجـد                           |
|     |       |            | أحمد                             |
|     |       |            | W. 0.740 G.                     |
|     |       |            | S. 0.6 Dia.                     |

| 72. | AE    |            | *Nasr-ibn-Muhammad.* (777 A.C.) |
|     |       |            | Obverse:                        |
|     |       |            | بِاللَّهِ                                 |
|     |       |            | Reverse: Defaced.                |
|     |       |            | W. 0.420 G.                     |
|     |       |            | S. 0.3 Dia.                     |

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1 Mr. Burgess's private collection-unpublished-Journal, Sind Historical Society, Vol. III.
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>73.</td>
<td>AE</td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>صر (نصر)</td>
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<td></td>
<td></td>
<td></td>
<td>Reverse: Defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.240 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.3 Dia.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>74.</td>
<td>AE</td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>صر (نصر)</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الملك</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.750 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75.</td>
<td>AE</td>
<td></td>
<td>Obverse: Upper lines defaced. Lower lines indistinct. They seem to be</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>النفرع عمروين</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Legend has four lines. Upper three give</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد رسول الله</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.632 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
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<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>76.</td>
<td>AE</td>
<td></td>
<td><em>Amran-ibn-Muhammad.</em> (Founder of Mansurah)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>♨️ ♨️ ♨️ ♨️ ♨️</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>♨️ ♨️ ♨️ ♨️ ♨️</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>عصر ولد العطر</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>An incomplete circle all round.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Left and bottom margin defaced. Probably محمد رسول were inscribed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.720 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.5 Dia.</td>
</tr>
<tr>
<td>77.</td>
<td>AE</td>
<td></td>
<td>Obverse: A bigger coin. Legend and arrangement same as above. 2nd and 3rd line affected by depression. Incomplete double circle, outer one being in dots.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ﷺ الملك</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ﷺ الامام ﷺ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Last line is defaced. Possibly double circle enclosing dots within incomplete circle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.950 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
<tr>
<td>78.</td>
<td>AE</td>
<td></td>
<td>Obverse: Legend same as above. First line <em>i.e.</em>, ♨️ ♨️ defaced last line indistinct. Incomplete double circle enclosing dots within it.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Rusted legend indistinct arranged in three upper lines. Lower lines seem to be محمد رسول</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.575 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.8 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
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<td>-------------</td>
</tr>
</tbody>
</table>
| 79. | AE    |      | Obverse: Lower part missing, legend same as above. First part of the third line and last line defaced. An incomplete double circle, outer one being in dots.  
Reverse: محمد رسول الله  
Lower lines defaced. Parts of the marginal circle and dots visible.  
W. 1.150 G.  
S. 0.8 Dia. |
| 80. | AE    |      | Obverse: Legend same as above. Its size and symbol of writing suggest that it is another coinage specimen of Amr-ibn-Muhammad.  
Reverse: Completely defaced.  
W. 0.950 G.  
S. 0.4 Dia. |
| 81. | AE    |      | Obverse: Legend from lines محمد رسول الله upper three lines. Lower line is almost defaced. It seem to be محمد  
Reverse: Rusted and illegible.  
W. 0.310 G.  
S. 0.4 Dia. |
| 82. | AE    |      | Obverse: الملك  
Reverse:  
W. 0.420 G.  
S. 0.4 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 91. | AE    |      | Obverse: Obliterated.  
Reverse: Almost defaced.  

\[
\begin{array}{c}
\text{لا} \\
\text{ medidas} \\
\text{ رسول} \\
\text{ الله} \\
\text{ عمر} \\
\text{ سد} \\
\text{ سد} \\
\text{ محمد}
\end{array}
\]

W. 2.30 G.  
S. 0.8 Dia. |
| 92. | AE    |      | Obverse: Rusted.  
Reverse: Very badly rusted.  

W. 0.350 G.  
S. 0.3 Dia. |
| 93. | AE    |      | Abd-ur-Rehman ibn Muslim. (751 A.C.)  
Obverse: عبد الر  
حن  

Last portion of the left margin and the lower margin missing. The legend is on the sides of the four pointed star as drawn above in pencil.  
Reverse: الرحمن  

Legend is within scalloped square around which are dots. The third line indistinct and confused.  

W. 1.760 G.  
S. 0.8 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 94. | AE    |      | Obverse: محمد
      |       | الرحمان
      |       | دين
      |       | Legend arranged around the 4 pointed star. Portion of the left and right side and the entire bottom line missing. The two crescent observed in the above coin is absent from the present one. Reverse: محمد
      |       |       | Left side very badly damaged. W. 2.40 G. S. 0.8 Dia. |
| 95. | AE    |      | Obverse: محمد
      |       | الر
      |       | حسن
<pre><code>  |       | Reverse: Minor portion of the decoration over the face of the coin legend indistinct but seems to be as above. W. 1.850 G. S. 0.8 Dia. |
</code></pre>
<p>| 96. | AE    |      | Obverse: Obliterated. Reverse: Almost defaced. Probably as on S. No. 93. W. 0.850 G. S. 0.5 Dia. |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>97.</td>
<td>AE</td>
<td></td>
<td>Obverse: عک ویللا</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: مک ول الور نلللا عصر الرحم</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.700 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>98.</td>
<td>AE</td>
<td></td>
<td>Obverse: Almost defaced. محمد الرحمن</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: الرحمن</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>......</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower line indistinct.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 2.145 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>99.</td>
<td>AE</td>
<td></td>
<td>Obverse: Damaged and almost defaced. محمد</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Same as above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.280 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
<td>-----</td>
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<td>-------------</td>
</tr>
<tr>
<td>100.</td>
<td>AE</td>
<td></td>
<td>Obverse: Damaged and defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 2.245 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>101.</td>
<td>AE</td>
<td></td>
<td>Obverse: Defaced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Same as above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.420 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>102</td>
<td>AE</td>
<td></td>
<td>Obverse: Defaced and rusted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Decoration same as above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>First and Second lines give الله and محمد</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Third line not visible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.500 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
<tr>
<td>103.</td>
<td>AE</td>
<td></td>
<td>Abdur Rehman Ibn Muslim. (751 A.D.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Third line is indistinct. Generally on coin محمد رسول الله is followed by الله. But here it does not seem so. There is another line but that is more indistinct.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>سو عبد الرحمن</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.770 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>104</td>
<td>AE</td>
<td></td>
<td>1 Abdulllah.</td>
</tr>
</tbody>
</table>

Obverse:

لا لله لله لله...
الله عبد الله

........

Reverse: Rusted and almost defaced.

W. 1.980 G.
S. 0.7 Dia.

| 105 | AE    |      |              |

Obverse:

لا لله
لا لله
الله
عبد الله

Reverse: Completely obliterated.

W. 0.320 G.
S. 0.4 Dia.

| 106 | AE    |      |              |

Obverse:

لا
لا
لا
الله
عبد الله

Reverse: Illegible.

W. 1.9 G.
S. 0.7 Dia.

1 Private collection, unpublished, Daud-Putas, Journal, Royal Asiatic Society, Volume III.
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 107. | AE    |      | **Obverse:** لا الله  
                  الا لله  
                  عباد الله  

Reverse: Completely obliterated.  
W. 0.550 G.  
S. 0.4 Dia.  

| 108. | AE    |      | **Obverse:** Centre  لا الله الا  

Margin: غرب معارس  

Reverse: Centre  محمد رسول الله  
Margin: عباد الله  
W. 1.20 G.  
S. 0.6 Dia.  

| 109. | AE    |      | **Obverse:** علي  
                  محمد  

Reverse: Rusted and defaced.  
W. 0.545 G.  
S. 0.8 Dia.  

<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>110.</td>
<td>AE</td>
<td></td>
<td>Obverse: Centre almost obliterated but seems to be identical with that observed as above. Margin: الله فرب مغاسب Here also date is illegible. A new feature is noticed on it <em>i.e.</em>, dots around the marginal legend. Reverse: Obliterated. W. 0.450 G. S. 0.3 Dia.</td>
</tr>
<tr>
<td>111.</td>
<td>AE</td>
<td></td>
<td>Obverse: ملک (محمد) رس (رسول) ان (الله) Reverse: Obliterated. W. 0.895 G. S. 0.4 Dia.</td>
</tr>
<tr>
<td>112.</td>
<td>AE</td>
<td></td>
<td><em>Amran ibn Musa</em> (832 A.C.). Obverse: Rusted with a standing crack through the middle. Almost defaced. عمران Reverse: Damaged and rusted and almost defaced. W. 0.950 G. S. 0.8 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
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<td>-------------</td>
</tr>
<tr>
<td>113.</td>
<td>AE</td>
<td></td>
<td>Obverse: Rusted and indistinct.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Margin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.650 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.5 Dia.</td>
</tr>
<tr>
<td>114.</td>
<td>AE</td>
<td></td>
<td>Obverse: Illegible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.750 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
</tr>
<tr>
<td>115.</td>
<td>AE</td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4th line obliterated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.250 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.5 Dia.</td>
</tr>
<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
<td>------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 116 | AE    |      | Obverse: Almost defaced.  
      |       |      | Reverse: 
      |       |      | علی  
      |       |      | محمد |
|     |       |      | W. 1.345 G.  
      |       |      | S. 0.7 Dia. |
| 117 | AE    |      | Obverse: 
      |       |      | وحد 
      |       |      | لاشريك له |
|     |       |      | Reverse: Central device exactly as found on S. No. 52.  
      |       |      | Margin: الا ميز |
|     |       |      | W. 1.540 G.  
      |       |      | S. 1.0 Dia. |
| 118 | AE    |      | Obverse: 
      |       |      | لاالله الالله وحد 
      |       |      | لاشريك له |
|     |       |      | Reverse: Pentagonal star in the field. Inscription indecipherable.  
      |       |      | W. 4.310 G.  
<pre><code>  |       |      | S. 0.9 Dia. |
</code></pre>
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>119</td>
<td>AE</td>
<td></td>
<td>Obverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>رسو</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>محمد</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.850 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>120</td>
<td>AE</td>
<td></td>
<td>Obverse: Within double circle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>لا الله الا</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Indecipherable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.240 G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.9 Dia.</td>
</tr>
<tr>
<td>121</td>
<td>AE</td>
<td></td>
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<td>Reverse: With a circle.</td>
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<td>علی</td>
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<td>W. 0.485 G.</td>
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<td>S. 0.4 Dia.</td>
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<td>122.</td>
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<td>محمد (محمد)</td>
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<td>123.</td>
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<td>Damaged and defaced.</td>
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<td>0.750 G.</td>
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<td>0.4 Dia.</td>
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<tr>
<td>124.</td>
<td>AE</td>
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<td>Obverse:</td>
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<td>عمر</td>
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<td>Reverse:</td>
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<td></td>
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<td>Within a circle.</td>
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<tr>
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<td>1.120 G.</td>
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</tbody>
</table>
| 125. | AE    |      | Obverse: ک ل و ح د.  
Reverse: Indecipherable.  
W.  0.520 G.  
S.  0.4 Dia. |
| 126. | AE    |      | Obverse: لا اله الا ع لم الله الا م سر ع ل ك  
Reverse: ع م ر  
سو  
W.  0.720 G.  
S.  0.5 Dia. |
| 127. | AE    |      | Obverse: Within an incomplete circle  
(محمد)  
(ع)  
الله  
Reverse: Within an incomplete circle. Dots around the circle.  
ب الله و لي ع ل ك (محمد)  
W.  0.650 G.  
S.  0.7 Dia. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 128. | AE    |      | Obverse: Within incomplete double circles.  
       |       |      |             |
       |       |      | صر محمد |
       |       |      |             |
       |       |      | Reverse: Defaced. |
       | W.    | 0.420 G. |             |
       | S.    | 0.4 Dia. |             |
| 129. | AE    |      | Obverse: Within an incomplete double circle. Dots around the circle.  
       |       |      |             |
       |       |      | محمد رسل |
       |       |      |             |
       |       |      | Reverse: Within an incomplete circle.  
<p>| | | |
|       |      |             |
|       |      | الله علی |
| W.    | 1.490 G. |             |
| S.    | 0.7 Dia. |             |
| 130. | AE    |      | Obverse: Broken to pieces. |
|       |      |             |
|       |      | Reverse: |
|       |      | محمد سو |
| W.    | 0.320 G. |             |
| S.    | 0.4 Dia. |             |</p>
<table>
<thead>
<tr>
<th>No.</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>131</td>
<td>AE</td>
<td></td>
<td>Obverse: Within a circle almost defaced. مک (محمد) رسول</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Within an incomplete circle. Dots around the circle.  السو</td>
</tr>
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<td>نالله</td>
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<td>عصروله</td>
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<td>العصر</td>
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<td>W. 1.740 G.</td>
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<td></td>
<td>S. 0.9 Dia.</td>
</tr>
<tr>
<td>132</td>
<td>AE</td>
<td></td>
<td>Obverse:  رسول</td>
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<td>محمد</td>
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<td>الله</td>
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<td>Reverse:  الرحس</td>
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<td>W. 1.700 G.</td>
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<td>S. 0.6 Dia.</td>
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<tr>
<td>133</td>
<td>AE</td>
<td></td>
<td>Obverse:  شریف</td>
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<td></td>
<td>Reverse: Obliterated.</td>
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<td>W. 0.810 G.</td>
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<td>S. 0.5 Dia.</td>
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<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
<td>134.</td>
<td>AE</td>
<td></td>
<td>Obverse: سُرْوَ (ل) محمد</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.890 G.</td>
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<td></td>
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<td></td>
<td>W. 0.450 G.</td>
</tr>
<tr>
<td>136.</td>
<td>AE</td>
<td></td>
<td>Obverse: رَمَوْ محمد سُرْ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 0.350 G.</td>
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<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
<td>137</td>
<td>AE</td>
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<td>Obverse:</td>
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</table>

Reverse: محمد

سو (رسول)

W.  0.770 G.
S.  0.5 Dia.

<table>
<thead>
<tr>
<th>138</th>
<th>AE</th>
<th></th>
<th>Obverse:</th>
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<tbody>
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</tbody>
</table>

Reverse: Within an incomplete double circle.

W.  1.650 G.
S.  0.8 Dia.

<table>
<thead>
<tr>
<th>139</th>
<th>AE</th>
<th></th>
<th>Obverse:</th>
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</table>

Reverse: Flower.

W.  0.480 G.
S.  0.4 Dia.
<table>
<thead>
<tr>
<th>No.</th>
<th>Metal</th>
<th>Date</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>140.</td>
<td>AE</td>
<td></td>
<td>Obverse: Within an incomplete double circle.</td>
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<td></td>
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<td>[Image]</td>
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<td></td>
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<td></td>
<td>Reverse: Defaced.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.750 G.</td>
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<td>S. 0.7 Dia.</td>
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<tr>
<td>141.</td>
<td>AE</td>
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<td>Obverse:</td>
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<td>سعد</td>
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<td>حد</td>
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<td>Reverse: Almost defaced.</td>
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<td></td>
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<td>W. 2.270 G.</td>
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<td>S. 0.7 Dia.</td>
</tr>
<tr>
<td>142.</td>
<td>AE</td>
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<td>Obverse: Defaced.</td>
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<td></td>
<td>Reverse: Defaced.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.810 G.</td>
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<td>S. 0.7 Dia.</td>
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<tr>
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</table>
| 143. | AE    |      | Obverse: محمد  
Reverse: علی  
W. 0.500 G.  
S. 0.4 Dia. |
| 144. | AE    |      | Obverse: رو  
Reverse: محمد  
W. 1.600 G.  
S. 0.6 Dia. |
| 145. | AE    |      | Obverse: Defaced.  
Reverse: اَللَّه  محمد  
W. 1.970 G.  
S. 0.7 Dia. |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>146</td>
<td>AE</td>
<td></td>
<td>Obverse: عمو</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>W.  0.420 G.</td>
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<td></td>
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<td></td>
<td>S.  0.4 Dia.</td>
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</tbody>
</table>

| 147 | AE    |      | Obverse: احد | Reverse: محمد |
|     |       |      | W.  0.450 G. |             |
|     |       |      | S.  0.4 Dia.  |             |

<p>|     |       |      | W.  0.690 G. |             |
|     |       |      | S.  0.5 Dia.  |             |</p>
<table>
<thead>
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<th>No.</th>
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<tbody>
<tr>
<td>149.</td>
<td>AE</td>
<td></td>
<td>Very small and illegible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. 0.410 G.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. 0.4 Dia.</td>
<td></td>
</tr>
<tr>
<td>150.</td>
<td>AE</td>
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<td>Obverse: Defaced.</td>
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<td>Reverse: Defaced.</td>
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<td></td>
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<td>W. 2.20 G.</td>
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<td>S. 0.8 Dia.</td>
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<tr>
<td>151.</td>
<td>AE</td>
<td></td>
<td>Obverse: رسو (ل)</td>
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<td></td>
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<td>Reverse: محمد</td>
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<td></td>
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<td>W. 1.400 G.</td>
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<td>S. 0.6 Dia.</td>
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<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
<td>152.</td>
<td>AE</td>
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<td>Obverse: عمد رسول (ل)</td>
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<td>Reverse: رسول</td>
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<td>W. 0.410 G.</td>
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<td>S. 0.4 Dia.</td>
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<tr>
<td>153.</td>
<td>AE</td>
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<td>Obverse: Damaged. الله</td>
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<td>Reverse: احد</td>
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<td>W. 0.850 G.</td>
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<td>S. 0.5 Dia.</td>
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<tr>
<td>154.</td>
<td>AE</td>
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<td>Obverse: Defaced. الله محمد</td>
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<td>Reverse: محمد</td>
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<td>W. 1.820 G.</td>
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<td>S. 1.2 Dia.</td>
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<tr>
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<td>Metal</td>
<td>Date</td>
<td>Description</td>
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</tbody>
</table>
| 155. | AE    |      | Obverse: محمد  
|      |       |      | Reverse: احمد |
|      |       |      | W. 0.910 G.  
|      |       |      | S. 0.8 Dia.  |
| 156. | AE    |      | Obverse: الله |
|      |       |      | Reverse: Defaced. |
|      |       |      | W. 1.70 G.  
|      |       |      | S. 0.6 Dia.  |
| 157. | AE    |      | Obverse: محمد  
|      |       |      | رسول(ل) |
|      |       |      | Reverse: Obliterated. |
|      |       |      | W. 0.920 G.  
<p>|      |       |      | S. 0.9 Dia.  |</p>
<table>
<thead>
<tr>
<th>No.</th>
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<td>محمد</td>
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<td>Reverse:</td>
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<td>علی</td>
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<td></td>
<td></td>
<td></td>
<td>W. 0.810 G.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>S. 0.6 Dia.</td>
</tr>
<tr>
<td>159.</td>
<td>AE</td>
<td></td>
<td>Obverse:</td>
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<td>عصر</td>
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<td>لصداد</td>
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<td></td>
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<td></td>
<td>Reverse: Rusted and almost defaced.</td>
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<td></td>
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<td></td>
<td>W. 1.250 G.</td>
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<td>S. 1.1 Dia.</td>
</tr>
<tr>
<td>160.</td>
<td>AE</td>
<td></td>
<td>Obverse: Upper lines defaced, lower lines indistinct. They seem to be. النصر عربویه</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reverse: Legend has four lines. Upper three give مجدد رسول الله 4th line indistinct seems to be عبدالله</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>W. 1.970 G.</td>
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<td></td>
<td>S. 0.8 Dia.</td>
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<tr>
<td>No.</td>
<td>Metal</td>
<td>Date</td>
<td>Description</td>
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<tr>
<td>161.</td>
<td>AE</td>
<td></td>
<td>Obverse: Incomplete double circle enclosing dots within ( \mathbf{\text{ا}} ) ( \mathbf{\text{n}} ) ( \mathbf{\text{ه}} ) &lt;br&gt; Reverse: ( \mathbf{\text{م}} ) ( \mathbf{\text{ه}} ) &lt;br&gt; W. 1.865 G. &lt;br&gt; S. 0.7 Dia.</td>
</tr>
<tr>
<td>162.</td>
<td>AE</td>
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<td>Obverse: ( \mathbf{\text{ا}} ) ( \mathbf{\text{n}} ) ( \mathbf{\text{ه}} ) &lt;br&gt; Reverse: Decoration same as above. Legend also seems to be same. &lt;br&gt; W. 0.700 G. &lt;br&gt; S. 0.5 Dia.</td>
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THE GRAND MOSQUE OF BANBHORE
(Plates XXV—XXVI)

by
S. M. Ashfaque

INTRODUCTION

The ruined city of Banbhore is situated about 40 miles south-east of Karachi on a low flat prominence on the right bank of the Gharo Creek. The creek now choked up with silt and sand marks the northern edge of the alluvium fan of the Indus Delta. It is noteworthy that the coastline above this demarcation is characterised by a gradual emergence apparent in the stretches of raised beaches observed upto Cape Monze and beyond, while below, it is marked by a complex process of crustal subsidence and siltation responsible for the changes in the coastal outline and alterations in the courses of the many distributaries of the Indus River.¹ The Gharo Creek formed the main course of the Indus before 1250 A.D.² The archaeological evidence shows that the story of the rise and decline of Banbhore enclosed in the time span from 1st century B.C. to the end of the 13th century A.D.³ is closely related to the hydrography of the Gharo Creek.

Banbhore excavations⁴ started in 1958 have revealed a number of landmarks which suggest that the ruins belong probably to the port of

² Ibid., pp. 146-164.
⁴ A lucid account of the history of Banbhore excavations has been given by Mr. Muntaz Hasan, S.Pk., in his book, In Quest of Daibul, published by the Writers Guild, Karachi in 1968. According to him General Cunningham was the first scholar who took interest in Banbhore from the archaeological point of view. Henry Cousen visited the site in early nineteen twenties, but he considered it too small to attach any importance. In 1930, N.G. Majumdar of the Archaeological Survey of India excavated some trial trenches. After Independence, Mr. Leslie Alcock made some cuts in 1951, but the work could not be carried to any purposeful end. Mr. Muntaz Hasan, who at that time held the office of Secretary to the Government of Pakistan, Ministry of Finance, took a keen interest in the site. His personal interest in the matter and his persuasion to the Ministry of Education at last bore fruit, and the Department of Archaeology started excavations of the site on the 2nd of March, 1958. The excavations continued for eight seasons under the guidance of Dr. F. A. Khan, S.I., T.Pk., and a wealth of antiquities and architectural features were discovered from the site. An Archaeological Museum at the site was established in August 1961.
Debal where the Muslim first set their feet on a career of conquests in Indo-Pakistan subcontinent under the command of the young Arab General, Muhammad bin Qasim in 712 A.D. The exact location of Debal has long been a vexed problem to the scholars of Muslim history in the subcontinent, and various investigators have attempted to fix the position of the elusive ancient port in different ways. Whether Banbhore is Debal of yore is a question still open to doubt. Mir Ali Sher Qani Thattavi writing his work, *Kitab Tauhafat-al-Kiram* in 1773 A.D. has mentioned Banbhore and Debal in a way which shows that these were two separate townships co-existing, as appears from the following excerpt from the third volume of his work dealing with the history of Thatta.\(^1\)

The name ‘Banbhore’ appears several times in the same volume in context with the romance of Sasui and Punhu. Dr. M. A. Ghafur in his article, *Fourteen Kufic Inscriptions of Banbhore*,¹ attributes the first use of the name, Banbhore, to this author, but tends to dispose of the matter too lightly. Alexander Cunningham in his remarkable work *Ancient Geography of India*,² places Debal in the vicinity of Lari Bunder. Henry Cousen³ is content to call Thatta as the ancient Debal. H. T. Lambrick who has made an exhaustive survey of literature on the geographic position of many historic sites of Sind, both from classic Arab sources and the works of various British Scholars, also appears to be in a quandry and states, ‘It appears to me that it (Debal) is very likely to have been at either of, or between, the sites suggested by Haig and Raverty, the one at Kakar Bukera on the Baghar, and the other a little south-west from Pir Patho; but in view of the uncertainty as to the whereabouts of the coastline, or of the mouth of the Indus, at this period, it is not possible to be more precise.’⁴

In his work on the problem of identification of Debal,⁵ Dr. N. B. Baloch has based his arguments on philological metamorphosis of place names, such as the V sounds in Van Vihara, replaced by B sounds, and the resultant contracted, could give the name Banbhore. Similarly the Arabic term, ‘Khaur’, meaning an estuary or a creek, such as the *Khaur-ad-Debal* mentioned by Ibne Athir, was gradually changed into Gharo because of the phonetic peculiarities of the Sindhi language. On the whole, his approach is more theoretical rather than empirical. Late Mr. Daulat-

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ram, an Indian scholar, suggested that ‘Deval’ was not the real name of the port conquered by the Arabs. The name belonged to a famous temple (Devalaya) in the town which had its own different name. The fame of the temple so much overshadowed the identity of the town that its real name was forgotten and it came to be known as ‘Deval’. Quoting reference from *Chunesarnameh* in Persian he states that gradually the entire region round about the port came to be known as ‘Deval’. The real Sindhi pronunciation was not دیول but دیول.

Dr. M. A. Ghafur in his discourse on the Kufic inscriptions has made out a logical case of the problem after reviewing a vast array of literary sources. He bases his conclusions in favour of the site of Banbhore being the extinct port city of Debal on some tangible points, most of which are corroborated from the historical references of Arab Geographers and verified from the evidence of the archaeological excavations at Banbhore.

The Grand Mosque of Banbhore, specially its *Kufic Inscriptions* bearing dates, is of pivotal importance in the arguments advanced by the scholar that Banbhore is Debal. Referring to the earliest dated inscriptions in the light of Baladhuri’s records he says, ‘It should be noted that the building which the inscription commemorates was completed just one year before the death of the Governor, Harun b. Muhammad. The inscription confirms the statement of Baladhuri that Harun undertook building activities at Daybul and it is proof positive in support of our contention that Banbhore is Daybul’. 

Perhaps this statement bears an overtone of finality, but it would not be wrong to say that to solve the problem with confidence, any future historian will have to observe in details the excavated ruins of Banbhore, specially the remains of the Grand Mosque (Plate XXV.b).

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1 Letter of Mr. Jairamdas Daulatram, addressed to Dr. F. A. Khan, dated Delhi, the 5th August, 1962.


3 The tables of the latitudes and longitudes of Debal quoted by him from Arab Geographers could offer a useful point of attack on the problem of fixing the position of the port if specific equivalents of linear distances in one degree space of latitudes could be calculated from the zij tables prepared by various Muslim astronomers, and if the line of reference of the longitudes could be determined in the works of the various authorities mentioned. A possible way of working back into the calculations is to find out the latitudes and longitudes of other well known ancient cities, such as Mansura, Nerun, Multan, etc., in the works of the same authorities, and after establishing a common factor of error, to equate them in terms of the modern conventions of the geo-mathematics.

Fig. 26.
The ruined Mosque of Banbhore is located in the ‘central sector’ of excavations of the extinct settlement and is marked off from the remnant stone and mud-brick walls of the surrounding houses by narrow lanes. It is roughly a square in plan, 128 feet east to west and 122 feet north to south in external dimensions. The main anomaly in the square plan lies in north eastern corner where a rectangular area seems to have been excluded from the built-up area of the mosque proper; and in the south eastern corner where the two walls meet at an angle of 85 degrees instead of the usual 90 degrees. Whatever features have been excavated so far give us at best an idea of the ground plan of the mosque as it stood in the last phase of its existence till mid-thirteenth century of the Christian era. A careful examination of these features and the scrutiny of the field reports help us in reconstructing its superstructure, which is par excellence a hypothetical affair. The main features of the mosque can be systematically grouped under the major heads of boundary walls, prayer hall, cloisters, courtyard and the door-ways.

**Boundary Walls**

As stated earlier, the boundary walls running east to west are 128 feet and those running north to south are 122 feet long. They vary in thickness from $3\frac{1}{2}$ feet to $4\frac{3}{4}$ feet and are built of finely dressed limestone blocks $2 \text{ ft.} \times 1 \text{ ft.} \times \frac{3}{4} \text{ ft.}$ in size set in mud mortar. The stones used in the southern wall are, however, mostly of irregular shapes. The surviving stumps of the walls measure variably a few feet from the last period’s floor level to their tops. The southern and northern walls are in a better state of preservation than the eastern and western walls.

The eastern wall, which is interrupted by a gateway, runs toward

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1 Dr. Harunur-Rashid informs that at the time when certain houses in the Sector were being excavated the attention was drawn to a shallow depression near the site, overgrown with cactus and thorny shrubs. Taking it to be a dried up drinking tank for cattle they laid a few experimental trenches. They struck buried walls of regularly shaped stone blocks running straight to considerable length. The discovery of a Kufic inscription near the portal intensified their interest in the structure, and in subsequent operations the entire plan of the building was revealed.

2 The writer is indebted to the Exploration Branch of the Department of Archaeology for giving access to the field records of Banbhore Excavations. He is also grateful to the members of the working team, particularly to Mr. M. R. Mughal, Mr. M. A. Qadir, Mr. Amjad Hussain, Mr. I. H. Nadiem, Mr. Niaz Rasool and Mr. M. Sharif whose recorded observations have been extensively used. Discussions with Dr. Harunur Rashid and Mr. R. K. Sarma have been of immense value in clarifying many clumsy questions about stratigraphy and architectural features, and their generous help is acknowledged with gratitude. He also thanks Mr. Habibur Rahman, Custodian, Archaeological Museum Banbhore for pointing out a few architectural peculiarities that he observed in the diggings along the eastern side during conservation work of the monument in 1969.
north, but ends up short of its junction with the northern wall, and its end is marked by a solidly built square buttress, transverse to it, protruding into the eastern lane. The foundation of the buttress, 5 feet square, is filled up with burnt bricks and compact soil, going considerably deep into the earth. The masonry layers of the buttress inclining towards the eastern wall suggest that it was built as a bulwark to strengthen the wall which was probably rendered unsafe during an earthquake. It has been mentioned that the north eastern corner of the mosque has a rectangular cut which seems to have been excluded from the area of the mosque proper\(^1\) by shortening the eastern wall. The excavation logs indicate that the 19 feet long side of this rectangular area was marked by a faint trace of an inferiorly built wall of cobble stones, which did not seem to be the extension of the eastern boundary wall. In the shallow foundation of this shaky wall were found several pieces of cylindrical carved stone, some in the form of Siva-lingam, and their chief purpose appeared to make the wall stay firm.

Deep diggings in square trenches along the eastern side\(^2\) showed a total number of 14 street levels formed against the boundary wall, leaving the intervening deposits of loose ashy and sandy soil. These levels suggest a continuous use of the eastern lane throughout the life period of Banbhore Mosque.

A square\(^3\) dug deeper near the entrance porch showed further four layers termed 15, 15A, 16 and 17. The layers 15 and 15A were formed of ashy loose soil, whereas layers 16 and 17 were composed of an admixture of loose brown and ashy soils, bone fragments, lumps of clay and stone pieces. It is noteworthy that a complete change in the pottery types occurred downward from layer 15, which in the first instance marked the end of glazed and white paste wares and all types of glasswares. The lower layers yielded smooth surfaced light red, pointed polychromes and well fired pottery sherds. Layer 17 revealed many

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\(^1\) In all probability on this piece of ground stood the lavatories or urinals for continence before ablution. Situation of an ablution platform inside the mosque near the same corner also favours this postulate. This was perhaps a mud built structure, with access through the streets. Recent clearance in this corner in connection with the conservation work show the presence of a narrow door opening inside the mosque, which was later on closed with stone blocks.

\(^2\) Clearance during conservation work in October, 1969 has revealed a small step like feature along the eastern wall, lying half way between the main doorway and the southeastern corner. There is another single step on the otherside of the wall toward the cloister. The position of the step in the street in front of a straight lane meeting the eastern lane perpendicularly suggests the presence of a doorway piercing the eastern wall, which might have been closed in later periods.

\(^3\) The square is specified as GX11/2 in the excavation logs.
specimens of round pedestal-footed smooth surfaced pottery and thin textured polychrome sherds with designs and proto-Nagari inscriptions painted in dark brown over buff slip. In short, the pottery recovered from layers 15 to 17 are quite distinct from the ceramics of the Muslim period.

The western wall of the mosque errs from a straight course by slight degrees with a feeble convex bulge inside near the alignment of the southern cloister. Digging along the outer face of the wall revealed that there was a narrow lane beside it. Eleven street levels intervened by sandy and ashy silt were revealed. From layer 11 in the bottom to layer 7 in the middle the street was about 6 feet wide, but later it became a little wider. Above the last period street level two layers of occupational debris interposed by a thick clay floor indicated that the street was discontinued in the last period of the settlement. A masonry structure, 3 feet in width with four steps was exposed a little south of the middle part of the wall in a square trench \(^1\) excavated outside. There are indications of its building in two periods in the way of some addition upward just along the outer face of the wall. Inside there is an indication of a door 3½ feet wide which probably pierced the western wall. Perhaps the door was made as a private entrance \(^2\) to the prayer chamber for the imam who in those days used to be an important person such as the Khalifa or his viceroy.

Diggings outside the western boundary wall did not show any circular protrusion outwards in the middle part which could suggest an architectural provision for the mihrab space. It is, however, a fact quite noticeable that the qibla wall has the maximum thickness of 4 feet 9 inches, and tentatively the mihrab might have been provided simply by cutting the inner side of the wall. The inner side of the qibla wall was, unfortunately, found badly damaged, and its disturbed masonry extended to an average depth of 1½ feet below the level of the last period floor.

In all the excavations along the boundary walls four distinct periods

\(^1\) The square trench is specified as GXI/1 in the excavation logs.

\(^2\) The tradition of building a Dar al Imara on the qibla side of the mosques, as discussed by K.A.C. Creswell in A Short Account of Early Muslim Architecture has not yet been verified in the case of Banbhore Mosque. There are indications of numerous houses on the northern, western and southern sides of the Mosque, and some houses on the southern and northern sides have been excavated, but no excavation has been made on the western side. The house F excavated on the northern side appears to have been an important public building, perhaps the Dar al Imara or viceroy's lodge. If so, it is probable that the passage through lane on the western side and the private entrance into the mosque were meant for the viceroy or imam.
of construction have been observed. Each reconstruction stands on top of the stumps of the earlier wall, and each is associated with one or more definite street levels. The associated finds assign the entire wall to the Muslim period. There is a marked difference in the type of masonry between the first and the later three periods.

The earliest period wall was built with finely dressed blocks of yellowish stone. The extraordinary good setting of the courses of stones show the skill of the masons in making the walls straight and solid. In the successive three reconstructions there is a gradual deterioration in the quality of the work and a decrease in the availability of building stones.

PRAYER HALL

The main prayer hall or sanctuary of the mosque measures 113 ft. in length and 34 ft. in breadth. Large blocks of stones lie fixed in the floor in three rows extending longitudinally and parallel to the qibla wall. These stone blocks were probably the pedestals of wooden pillars which supported the roof. The assumption is based on the fact that remains of decayed wood were found in some sockets observed in some of the stone blocks. Some of the pedestal blocks show carved ornamentation. Such carved stones were also found reused in different parts of the mosque, suggesting that they were obtained from some important pre-Muslim building.

The stone pedestals lie fixed to the floor at regular intervals and there is no evidence of the apse or the axial nave with a wider space between middle columns and a higher elevation than from the rest of the roof of the prayer hall as in the case of the Umayyad Mosque of Medina. It might have been only a rectangular hall with rows of pillars supporting a flat roof.

1 The stone shows the same characteristics of texture as the arenaceous limestone from the quarries near Jungshahi used extensively in the graves and monuments of Makli Hill and Chaukandi tombs of the 14th and 15th century A.D. There is a great possibility of the stone coming from the same source. The material was probably transported by river crafts on the Indus at that time flowing through the Gharo. A gradual siltation of the Creek in later period perhaps affected the water transport system, explaining a gradual decrease in supply.


3 Jean Sauvaget, The Umayyad Mosque of Medina, Chapter VI, PANSDOC Translation No. 12 from French, La Mosquée Omeyyade de Medine Etudes sur les origines architecturales de la mosquée et de la basilique, Vonoest, Paris, 1947.
Stone bases placed in the line running north-south and separating the prayer hall from the courtyard have been strengthened by a foundation wall running straight in the row and made of small pieces of stone. The pedestal stones of the front pillars of the sanctuary have round sockets on either sides. These sockets were provided perhaps for fixing the door leaves and for their smooth working on the hinges.

There is some confusion in the southern part of the prayer hall, caused by the extension of the middle foundation wall of the southern cloisters well beyond the third row of pillars. Its counterpart in the northern cloisters comes only upto the first row of columns separating the prayer hall from the courtyard. Perhaps there was nothing consequential in the projection of the middle foundation wall of the southern cloisters into the prayer hall. A rectangular stone structure, 3½ ft. by 2 ft. projecting from the southern boundary wall on the inner side in alignment with the western limit of the courtyard, indicates that the cloisters did not extend beyond it into the depth of the prayer hall. With three rows of pillars running lengthwise, the main prayer hall thus comprised of 36 unit squares, marked successively by four pillars at the corners.

**GRAND MOSQUE, BANBHORE**

**STRATIGRAPHIC SECTION FROM PRAYER CHAMBER**

![Stratigraphic Section from Prayer Chamber](image)

**TO THE WESTERN LANE ACCROSS**

BOUNDARY WALL G XI/6.7.8 Looking South.

![Boundary Wall Diagram](image)

Fig. 28.
Digging inside the prayer hall revealed 6 successive, well defined, compact clay floors. Some of these floors indicate the use of shingle and rammed pebbles. Layers 8 and 9 below the successive floors are an accumulation of nearly 7 ft. deep mixed debris. The composition of the two layers is almost the same. This thick accumulation of mixed debris, which may have been a filling, has been found spreading over the area of the courtyard, and contains large number of painted glass pieces, thin white paste and glazed potsherds of early Muslim types. An inscribed potsherd with writing in early Naskh characters came from this thick accumulation. It is successively followed by an occupational layer and a yellowish concrete floor which have been labelled as layers 10 and 10A. The occupational layer 11 which comes below the concrete floor is marked by the absence of glazed sherds and by the appearance of red burnished sherds, the characteristic features of pre-Muslim period.

It has been stated earlier that no architectural projection for the mihrab space was found in the qibla wall,\(^1\) and perhaps the mihrab was indicated simply by cutting a vertical niche in the inner side of the wall. A slab of stone, distinct from the pedestals stones of the pillars, or the yellowish limestone blocks of the masonry, was found lying a few feet from the base of the qibla wall inside the prayer chamber. The stone occupies precisely the position of the probable mihrab. It is 2½ ft. in length and 2 ft. in breadth, with collateral corners cut off to give it roughly a semicircular shape. Perhaps this slab of stone was fixed to the vertical niche to mark its top, and it fell down sometime when the wall was crumbling to pieces.

**Cloisters**

On three inner sides of the mosque in east, north and south are seen traces of masonry foundations running in parallel alignment with the boundary walls. These walls are 2 ft. thick on an average and are marked by stone bases at regular intervals with post-holes. It appears that there were covered cloisters and corridors with roofs resting on double rows of wooden pillars. The peripheral cloisters flanking the boundary walls show masonry baulks which probably had been the foundations of the partition walls, dividing them into a series of hujras

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\(^1\) Some scholars of Muslim architecture have expressed their despair at the apparent absence of mihrab projection in the qibla wall and are sceptic about the ruins belonging to a mosque at all. They have variously tried to argue that it was a serai, a Buddhist monastery, a madrasah etc. Dr. Abdullah Chaghtai argues that the remains are actually of a fire temple. The circumstantial evidence and the stratigraphy, however, are strongly in support of the building being a Jami Mosque.
measuring 11 ft. by 9 ft. on an average. The peripheral cloister along the western wall is a little narrower than those along the southern and eastern walls. The number of hujras along the southern side is 7, leaving aside the one at the corner of the junction of southern and eastern boundary walls. On the eastern side three hujras were situated south of eastern main entrance, and four hujras on its northern side. Along the northern side are traces of five hujras, two being west of the northern main entrance, and three on the eastern side. Thus in all, the peripheral cloister was divided into 20 hujras. These hujras opened on 10 ft. wide corridors running along all the three sides of the open courtyard or sehni of the mosque.

The fact that there are clear traces of foundation walls existing in the intervening spans of the pillar bases, gives support to the postulate that they were meant for strengthening the bases. Digging in the southern cloisters has revealed four successive floors paved with burnt bricks. After long use when a layer suffered much wear and tear, it was covered with a new layer. Some depressed portions were also filled up with compact clay or stone pebbles.

It has been stated earlier that the central foundation wall of the southern cloisters extends well inside the prayer hall, and that there is a rectangular stone structure which looks like a pillar base projecting from the southern boundary wall on the inner side in the alignment of the courtyard. In the eastern side of this projected structure, there are three large, dressed stone blocks fixed on the floor at regular intervals, just along the southern boundary wall. Two other stone blocks opposite the first and the third are found similarly fixed to the floor against the southern face of two base of the middle row. The stone block used against the eastern base is finely carved. The carving is done in three stepped tiers. The lowest tier is plain. The middle tier is carved with relief decoration of lotus petal. The upper tier has a circular indented projection in each corner.

Some peculiar arrangements seem to have been made in the southeastern corner room of the cloisters which is bordered by a course of heavy dressed stone lining in the west and north. These features suggest the possibility of a staircase built in two or more stages skirting the

1 The stone is an important example of building material from Hindu temples, re-used in the construction of the mosque.
northern and western walls of the chamber. Unfortunately the surviving stumps of foundations do not provide much substance to make a firm conclusion. It requires mentioning that two very large and high heaps of fallen burnt bricks were found by the western side of the room. The bricks of this debris are generally of the sizes smaller than those used as roof tiles. Following are the sizes of a few complete bricks: $10" \times 5" \times 2", 9\frac{1}{2}" \times 6" \times 2\frac{1}{2}"$. Among these, some carved bricks with peculiar type of relief decorations were also found.

A slab of stone broken into three large and a number of smaller pieces was found on the western side of the above mentioned heap of burnt bricks. The stone pieces were found scattered over a wide area over the fourth period floor. On joining them together it was found that the slab was engraved with a floriated Kufic inscription, (Plate XXVI.a) comprising Bismillah, Kalimah, a Quranic verse (No. 18 of Suratul Tawbah), the name of the ruler partially missing and the date 294 A.H. (906-7 A.D.). Another Kufic inscription carved on a single stone slab was found as a base of wooden column used in the south western corner of the courtyard, and it bore the date 239 A.H. (853-54 A.H.). Some more stone slabs containing Kufic inscriptions were found inside and outside the northern boundary wall of the mosque.\footnote{For details about the Kufic inscriptions found from the Mosque area the best existing reference is the article, “Fourteen Kufic Inscriptions of Banbore,” by Dr. M. A. Ghafur, op.cit.} The inscription dated 294 A.H. is distinct from the first dated and the rest of undated inscriptions in that the sides of its engraved words sink perpendicularly to the surface plan of the stone and their depressed bottoms are flat, whereas in other inscriptions, the sides of engravings sink in the surface with a slant and make V angles. The 294 A.H. inscription is incidentally the only known specimen of the floral Kufic in the Indo-Pakistan subcontinent. Its superior workmanship suggested that probably it was prepared in Mosul or Baghdad at the instance of the ruling Governor of Sind.

A room in the northern cloisters still preserves a thick lime plastered floor. Large number of earthen-ware oil lamps were found lying here, and perhaps this room was used as a store for oil lamps and spouted earthenware water pots in the last period of the mosque. A square space east of it seems to have been used as an ablation platform as there exists a small drain at its foot joining with a wider drain to lead the water out. The principal drain is solidly lined with stone blocks and the crevices filled with lime plaster. From the north-eastern corner of the
court yard it proceeds with gradual slope toward north and pierces through the boundary wall. Pieces of ablation pots and a large number of potsherds were recovered from this drain.

**COURTYARD**

A rectangular space surrounded on three sides by the above mentioned cloisters and the prayer chamber on the western side was obviously the *sehn* or the courtyard. It measures 75 ft. from north to south and 58 ft. from east to west. The courtyard was open to the sky. The existence of a large drain in the north eastern side, as described in the preceding account, must have drained the rain water out from the courtyard.

The courtyard was paved with baked bricks of the size 14", × 10½" × 1½". The bricks were laid in somewhat arcuate rows extending from south east to north west direction. The pavement appeared to have undergone many repairs in the way of replacement of damaged and decayed bricks by new ones. In an area of depression in the courtyard, small river pebbles were placed over the brick pavement. On excavating a small portion of the *sehn* four successive floors were observed, which agree well with the four periods of reconstruction of the boundary walls and other features of the mosque. In the last period the brick pavement was covered over by a floor of compact earth. In the middle of the courtyard a slab of stone 5 ft. long was found buried vertically in the floor with its edge projecting a few inches above the brick pavement. What practical purpose this slab of stone served is difficult to say. Perhaps it was buried in the last period when the worn out brick pavement was being covered with a compact clay layer to make a uniform surface with reference to the projecting edge of the stone slab.¹

Towards eastern side of the courtyard opposite the entrance was found a circular pit of 4 ft. diameter and another smaller pit of 1½ ft. diameter west of it. These pits were the kilns made in later centuries long after the mosque had ceased to exist and its structures lay in heaps of rubbles. The excavation records show that in the grid squares G × 1/4 and G × 1/5 a hard yellowish concrete floor existed at the bottom of layer 1. This appeared to be a temporary affair of a people who were

¹ Recent clearance of the mosque floor in connection with the conservation work has shown that the buried portion of the stone slab goes 2 feet deep, and it bears no carvings or special characteristics which could suggest its use as a pedestal for some statue, as would be possible if the contention of the proponents of the 'temple theory' were correct.
ignorant about the existence of the mosque buried underneath. The settlement of Banbhore at that time must have already been a mound, with its rolling surface windswept and covered with heath. The kilns sunk from the surface of the overlying accumulation of earth might have been made by those people in pursuit of some metallurgical profession. The kilns contained ash, charcoal, pieces of baked clay and charred fragments of animal bones. A large number of post-holes driven from the same level also disturbed the brick pavement buried below.

DOOR-WAYS

Remains of the mosque suggest two main portals opening in the eastern and northern boundary walls, and a smaller doorway in the western side. It has been mentioned in context with the eastern wall of the mosque in a footnote that during recent conservation work of the Banbhore Mosque, a small step-like feature was exposed lying half way between the main doorway on eastern side and the southeastern corner. There might have been a door at this place which in later period was closed up. In the absence of its proper correlation with the stratigraphic horizons nothing more can be said about it with certainty.

The eastern doorway was found in an extremely dilapidated condition. Nonetheless, it appears to have been the principal entrance with a passage 5½ ft. wide. The foundation walls of the porch turn at rightangles from the eastern boundary wall and go up to the first row of the pedestals of pillars in the eastern cloister. A flight of three steps led one from the street level to the floor of the porch, and one more step brought to the floor of the cloister. Presence of two small drain sluices opening from

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1 The little known indigenous profession of silver and gold extractors from river sand in Indo-Pakistan sub-continent deserves an inquiry by archaeologists and economists. With the invention of dredgers and hydraulic mining this ancient profession has turned to insignificance in modern times. But in the past ages the main supply of precious metals was the monopoly of the native metallurgists who combed their way through courses of rivers and pitched camps on prospective sandy banks and beaches. They were perhaps a mixed cast of blacksmiths and fishermen (lohars and macheras, cf., Risley’s Report on the Census of India 1901). Such native metallurgists still operate along the river banks in East Pakistan, Madras, Mysore, Travancore, and possibly in other parts of the sub-continent too. They gather micaceous sand of coarser grain from the river beds and beaches by a process of panning. The finally sifted heavy grains of sand are enclosed in clay balls which are dried and then roasted red hot in a kiln. The heat melts the minute grains of gold or silver and the metal concentrates in large droplets inside the clay ball. These are broken after cooling, and the pellets of the metal are carefully collected together. These grains of silver (or gold) are again heated in a crucible and then moulded in ingots. The precious metal obtained in this way often contains a large proportion of impurities, usually lead, zinc, tin and copper. To get rid of some of these impurities pieces of bones are put in the crucible. The phosphorus in the bones reacts with the baser metals and forms a flux on the surface, which is easily removed.

The contents of the kilns at Banbhore conform well with the above mentioned circumstances of the work of silver or gold extractors, and it is quite likely that a few centuries after the destruction of the site, such a band of metallurgists camped there in the depression of the ‘Central Sector’ to work on the sand of Gharo Creek. The isolation of the deserted place afforded them the much needed privacy necessary for the work.
the flanking huīras suggest that the side walls of the porch continued above the floor of the huīras. Probably these walls rose to the height of the storey and projected a little above the roof to provide an elevated fronton.

The entrance porch and the steps belong to the 3rd period of reconstruction. In this period many fillings in the entrance porch are evident. Corresponding to the successive rise in the street level, the relative level of the porch was maintained higher throughout the period. The indication of a gateway in the 1st period boundary wall was partially traced just under the lowest step of the 3rd period gateway. In the last period the width of the gateway was reduced to 3½ ft. by placing stone blocks inside the porch.

The northern doorway of the mosque was originally 7 ft. wide, but in the later period its breadth was reduced to 3½ ft. Mixed material comprised dressed and unhewn stones and burnt bricks were used in the parts erected for reducing the width. The doorway was found in a good state of preservation, its walls surviving to 3½ ft. from the floor level.

On the inner side of the portal on either sides are foundations of two massive projections of dressed stones. They look like bases of thick pilasters added to the wall to increase its depth and strength, probably for the purpose of building an elevated fronton.

Many traces of wooden door frames, door leaves, and wooden threshold bordered by stone linings were observed in the northern doorway. Iron nails were still fixed in positions with the decayed wood found on the inner side of the doorway. Several carved stones with Kufic inscriptions (undated), and many stones with beautifully worked relief decoration in the sunflower pattern and in different kinds of lotus designs were lying scattered near the doorway. Their presence indicated that portal standing in its original form was quite an impressive feature of the mosque.

An important feature in the main doorways on the east and north as well as the narrower entrance opening in the qibla wall of the mosque at Banbhore was the presence of the Siva-lingams, forming the lowest steps of the flight of stairs. These lingams of stone have lower parts quadrangular, the middle portion octagonal and the upper parts circular,
conforming well with the description of linga given by Varahamihira.\(^1\) We know it upon the authority of Al Beruni that the broken parts of the idol at Somnath carried by Mahmud Ghaznavi were placed below the stairs of the mosque at Ghazni on which the people rubbed their feet clean from dirt and wet before entering the mosque.\(^2\) The Muslims of Banbhore subjected the Siva-lingams to the same contemptuous position, and the fact further dispels the doubt that the building was a temple of any sort. Perhaps this vogue of trampling beneath the feet Hindu idols spread from Ghazni to Banbhore in the eleventh century A.D. for the Muslims of Sind kept up regular commercial communication by means of caravans with Khurasan, Zabulistan and Sijistan by way of Kandhar and Ghazni.\(^3\)

**Stratigraphy**

While horizontal excavations have revealed a complete plan of the Banbhore Mosque and the houses and streets around it, the vertical diggings give some clue to the building phases and the episodes of the history of the ancient settlement. The stratifications of cultural debris in eight trenches dug on the four sides of the mosque and inside the building area need a careful study, bearing in mind at the same time that too minute an observation of each and every layer would amount to 'seeing the wood for the tree'. The scientific value of stratigraphic sections cannot be denied, but vertical study must be correlated with the horizontal picture in order to obtain a sufficiently reliable chronology.\(^4\) In Banbhore, deep diggings at half a dozen points have provided an almost complete cross-section of the mound from top to the virgin soil, showing three distinct periods—the Scytho-Parthian, Hindu-Buddhist and the Islamic—datable from the 1st Century B.C. to 13th Century A.D.\(^5\)

The deepest trench dug near the eastern gate of the mosque goes 13 feet, cutting across the entire gamut of the Muslim period to the layers of pre-Arab occupation (Plate XXV.b). Another trench dug south of the eastern gate in the cloister goes 9 ft. deep. On the western side

\(^{1}\) Varahamihira, *Brihatsamhira*, Chap., LVIII, p. 53.
\(^{3}\) Sorley, H. T., *The Gazetteer of West Pakistan*, (The Former Province of Sind), Lahore, 1968, Ch. VI, p. 149.
a long trench was dug from the prayer chamber across the boundary wall to the western lane, with its shaft of 7 ft. depth made in the prayer chamber. Besides these there were dug other square trenches near the north eastern side, along the eastern part of the southern boundary wall, along northern wall and over the late period kiln in the sehν of the mosque. Equating the profiles of these trenches with that of a 30 ft. deep trench on the north eastern margin of the Central Sector, we obtain four boldly delineated phases or sub-divisions of Muslim period.

The number of layers intervening between the principal phases, their composition and thickness are not uniform in all the trenches of the mosque mentioned above. Variation in number, thickness and composition of the layers is, of course, a function of the local vicissitudes, for all places in the mosque area and the surrounding lanes would not be subjected to a uniform accumulation of earth and debris.

The eastern lane shows 14 street levels with the intervening deposits of loose ashy and sandy soil, as has been already stated in context with the discussion on the eastern boundary wall of the mosque. In absence of evidence of a proper drainage system, it is likely that the waste water from the neighbouring houses used to flow in the street to form muddy patches, which were frequently covered over with a deposit of soil and paved with bricks. Somewhat different circumstances in the western lane, however, did not necessitate such frequent deposit of earth, and it showed a lesser number of layers sandwitched between the principal phases. This street fell in disuse and in later period was discontinued as is evident from the compact clay floors resting over a succession of 11 street levels.

A deep section in the prayer chamber shows several alteration in the floor level and its composition, such as the clay floors observed in layers 3, 4, 5 and 7. Beneath this series is a thick filling of loose ashy and brown earth with potsherds, pebbles and sand, resting over the layer 10A, which is a yellowish concrete floor of the early period. This floor shows a continuation below the late period kiln in the sehν and in the trench dug in the eastern cloister southward of the doorway.

The two dated inscriptions found in the mosque could have provided specific datum had they been found in definitely situated layers,
but as the excavation reports show, the inscriptions were discovered scattered over a wide area in highly disturbed accumulations and their stratigraphic position was no sure basis for fixing any specific datum. The four principal phases of the Muslim occupation, therefore, have been analysed on the basis of ceramic studies and structural renovations as follows:—

(1) The Umayyad Period (C. 715-750 A.D.).—Characterized by decorated white paste pottery and Sassanian type heavy blue-green glazed ware. The foundation of the boundary walls of the mosque are sunk through the layer 15 and 15-A, which are pre-Muslim accumulation layers. These layers near the eastern doorway are composed of ashy and brown loose soil in which potsherds of glazed and white paste wares are absent. The exact date of the foundation of the mosque in Umayyad period could not be ascertained but the foundation trench was dug nearly three feet deep from the then ground surface, and its bottom naturally rested on the pre-Arab accumulation layers, which may go to some two hundred years before the date of invasion, on a conservative estimate of the rate of accumulation.

For some time after the conquest, the Muslims might have performed their congregational prayers in an open ground, probably with a large block of stone placed toward west to indicate the direction of Ka'ba,1 fundamentally conforming with the sayings of the Prophet as Bukhari relates: "The earth has been created for me as a masjid and a place of purity, and whatever man from my Umma finds himself in need of prayer let him pray (anywhere)." The early camp mosques of Kufa, Basra2 and Fustat were built of reeds and thatch, so that they could, if necessary, be taken down with the movement of the military camp. In Sind also the construction of mosques in solid forms would have pended the completion of the mission of conquests and a return of the mode of life to normalcy. Giving a conservative concession of time margin, the construction of the Banbhore Mosque would not have been undertaken earlier than 715, or four years after the date of invasion. There is no inscrip-

tion bearing record of the earliest construction of the mosque, probably owing to the fact that it was not customary in the early Arab period to leave epigraphical records for every building. At any rate, the stratigraphic records prove beyond doubt the foundation of the mosque was laid in the Umayyad Period.

(ii) The Early Abbasid Period (750-892 A.D.)—During this period a variety of splashed, mottled, slip-painted and inscribed lead glazed wares were introduced. Deep diggings along the southeastern portion of the boundary walls and at other places indicate a major repair to the earlier structure. The stone block courses in the boundary wall are not exactly superimposed on the earlier stumps of the walls, but at places project a little in or out from the previous alignment of the masonry. The earliest dated inscription (239 A.H. or 853-54 A.D.) would obviously fall within this second phase of the history of the mosque. Perhaps this need for extensive repairs arose after the devastating earthquake recorded in the time of the exploits of Sheikh Abu Turab who seized upon the fortified town of Tarrah in the district of Sakura and whose tomb is reported to be situated at Gujo. The southern wall of the mosque appeared to have suffered the greatest damage, and its rebuilding was done economically by using mostly undressed stones picked from the rubble. The square buttress toward the north eastern side also appeared to have been constructed during this period to provide a bulwark to the weakened eastern boundary wall.

(iii) The Late Abbasid Period (892 A.D.—12th Century A.D.)—This period is distinguished by the introduction of Sgraffiato glazed wares and imported Chinese porcelain and celadons. The somewhat slipshod repairs done to the mosque in preceding period could not prove very enduring. The surviving remains of the boundary wall show a second repairing. This time large

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2 Ghafer, M. A., Ibid., pp. 77-81. The dated portion of the inscription is very much decomposed. Previously the date was accepted as 109 A.H. (727 A.D.). Mr. M. A. Qadir, Assistant Superintendent of Archaeology in his resume of the excavations during 1959-61, did painstaking work in deciphering the date which read سنة خمسة وثلاثين وسبعة وتسع وثلاثين of 239 A.H.
4 There is record of another earthquake in 280 A.H. during the governorship of Abdullah son of Umar bin Abdul Aziz in the province of Sind (c.f., Ibn al-Athir, Leiden, p. 323).
carved blocks from the original structure were used mostly in lining the outer facing of the walls, while the inner thickness was filled with rubbles in mud mortar. Some patches on the outer surface of the western wall consist of heavier blocks of sandstone and conglomerate as used in the fortification walls of Banbhore. These stone blocks are distinct from the arenaceous limestone used in the earlier structure, and speak for a scarcity of the latter variety of stone. A dearth of building stone probably motivated the use of the inscribed stone slab of the preceding reconstruction as a base for the wooden pillar in the southwestern corner of the courtyard. The stepped structure in the western lane adjoining the private entrance in the Qibla wall also appeared to have been constructed in this period.

The second dated inscription (294 A.H. or 906 A.D.) carved in floriate and architectural Kufic is obviously in commemoration of this extensive repair of the mosque done at the command of Amir Muhammad ibn (Abdullah). It may be inferred that an ambition to rebuild the mosque properly was limited by the scarcity of building material, and despite the ostentatious protocol inscription, the builder had to content himself by using such material as could be had with ease and economy. The roof of the prayer chamber was given support of wooden pillars implying wooden tie-beams and rafters also, which preclude the use of arches. The main entrances of the mosque, however, might have been provided with massive frontons with arched openings as their width and foundation traces would suggest.

(iv) The Period of Decadence and Extinction (Late 12th to mid 13th Century A.D.).—The last phase is represented by the scanty remains of the settlement confined to the east of a weak and shoddy defence wall built across the settlement from north to south. The large harbour town had dwindled to a small military outpost by that time. In this period both main entrances of the mosque on the east and north appear to have been made narrow by raising up stacks of stones and bricks on either sides. It is probable that the arches in the frontons built during the second reconstruction showed cracks and signs of sagging, and in order
to prevent their collapse the supporting stacks were raised on either sides of the doorways. Barring this probability, there appears little justification for narrowing the main entrances of the mosque.

ARCHITECTURE—COMPARISON AND RECONSTRUCTION

Besides the two dated inscriptions mentioned in preceding pages several other undated inscriptions and many carved stones with beautifully worked relief decoration in sun-flowers or lotus patterns were found lying haphazardly near the doorways. It is possible that most of the stone carvings bearing sun flowers and lotus were re-used from Hindu temple which existed in the early period a little to the west of the Mosque, whereas the stone slabs bearing Kufic inscriptions were prepared locally. A few of these inscriptions bear Quranic verses, such as the one inscribed with partly legible line from the Chapter Al-Qasas. Some inscriptions testify to a dispute between the Mutazzalites and anti-Mutazzalites as is evident from their polemic texts. According to the style of engravings, they can be divided in two groups. Inscription of one group which seems to be half finished is in thick letters and that of the other group is in thinner letters. The low depressions of the inscriptions in the latter group are reasonably proportionate and well preserved.\(^1\)

The large ensemble of Kufic inscriptions, the ablution platform, a large number of terracotta oil lamps, spouted vessels used in ablution and the general layout of the building rule out all scepticism as to the building being a congregational Mosque. The features that are generally associated with mosque are a Mihrab, a Minbar, a Main prayer hall, a courtyard with a water tank in its middle or in the absence of a water tank in the courtyard a well at a suitable place, a Minar or Midhan, a lavatory and latrines. In the Grand Mosque of Banbore, the main prayer hall, the cloisters and the courtyard as described earlier correspond perfectly in the scheme. The lavatories and latrines, as proposed earlier, might have been situated in the north western corner of the mosque in the rectangular area excluded from the main building, and perhaps there was also a water reservoir located in the area.

A very important item of mosque furniture was the pulpit (minbar)\(^2\)

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SILVER COINS, INDO-SASSANIAN PERIOD

SILVER COIN OF WALID I. 95 A. H.

SILVER COIN OF WALID I (705-715 A.C.)

SILVER COIN OF HISHAM BIN ABDUL MALIK (724-743 A.C.)
MINTED AT WASIT.

Banbhore. Early Muslim coins
SILVER COINS
ARAB-SASSANIAN PERIOD

ARAB-SASSANION COPPER COIN

ARAB-BYZANTINE COPPER COIN

Banbhore. Early Muslim coins
COPPER COIN OF UMAYYAD PERIOD

GOLD COIN OF ABU-JAFAR
HARUN AL-WASIQ BILLAH, 9TH
ABBASID CALIPH (842-847 A.C.).

COPPER COIN OF MOHAMMAD BIN BARMAK
(803 A.C.)

COPPER COIN OF Abbasid Period

Bambhore. Early Muslim coins
COPPER COIN OF ABBASID PERIOD

COPPER COIN OF HISHAM BIN AMRU, GOVERNOR OF SIND UNDER THE 2ND ABBASID CALIPH AL-MANSUR (768 A.C.)

COPPER COIN OF HISHAM BIN AMRU, GOVERNOR OF SIND UNDER THE 2ND ABBASID CALIPH AL-MANSUR (768 A.C.)

COPPER COIN OF HISHAM BIN AMRU, GOVERNOR OF SIND UNDER THE 2ND ABBASID CALIPH AL-MANSUR (768 A.C.)

COPPER COIN OF ABDUR REHMAN, GOVERNOR OF SIND (751 A.C.)

Banbhore. Early Muslim coins
GRAND MOSQUE, BANBHORE

b. Banbhore. Exposed section of a deep pit, eastern side of the Grand Mosque

b. Banbhore. Panoramic view of Grand Mosque from west
Lahore Fort. Royal Bath, Jehangir's Quadrangle. Fresco paintings:
a. Lady with mirror  b. Angels holding mirror
a. Lahore Fort. Khwabghah-i-Shahjahani. Sikh Prince with consort

b. Lahore Fort. Shish Mahal. Painting in the Long Room
Lahore Fort. Khwabgah-i-Shahjahani. Krisna with Gopi
North Bengal stone sculpture.  

a. Three-faced Brahma  
b. Sthanka Visnu  
c. Visnu riding on Garuda
North Bengal. Visnu Patta, obverse and reverse
North Bengal stone sculpture.  

a. Ganesa  b. Surya  c. Hara-Gauri
North Bengal.  

- **a. Nandi Bull**
- **b. Garuda**
North Bengal.  

a. Mahisamardini  
b. Sarasvati  
c. Manasa  
d. Boar incarnation of Visnu
North Bengal.  

a. Subrahmanya.  
b. Sadyajata (mother and child)
which stood beside the prayer niche and very soon received the characteristic form it was to retain during its further development: two triangular panels of wood with narrow steps between, a parapet and an entrance door, and later a baldaquin-like roof. The earliest example of this kind stands in Sidi ‘Oqba. Wooden minbars are still seen in some of the mosques of the Indo-Pakistan sub-continent, and the one important example in sight is the wooden minbar in Wazir Ali’s Mosque at Lahore. A wooden minbar, if there was any in the Banbhore mosque, could not survive the ravages of time, and along with other wooden objects such as the pillars, tie-beams, door jambs, etc., it succumbed to the attack of white ants, or perhaps the wood was taken away by wayfarers in later periods when the mosque already stood in ruins.

The architectural nature of the Banbhore Mosque with a flat roof either of wood or of brick tiles may not suggest for a huge, well planned Minar. It may be mentioned that large size burnt bricks suitable for use as roof tiles and also decayed wood, though found in the mosque area here and there, were not enough to make any dependable conclusion asserting that the roof was covered with brick tiles.\(^1\) The peculiar and complex arrangement found in the south eastern corner of the mosque with the large heaps of fallen bricks, as already discussed, strongly suggest internal stairs which lead up to the Minar on this corner of the mosque. The great mosque of al-Mutawakkil at Samarra in Iraq gave rise to the tradition of midhans with square bases and a spiral staircase rising to the top. The idea of building spiral minarets occurred to the Caliph\(^2\) while one day he held a scroll of paper in his hand. The scroll formed itself into a screw spiral. The idea of building a minaret like that appealed to him very much and he ordered such a minaret to be built on the northern side of the Samarra Mosque, opposite to the qibla wall. The internal foundation traces inside the south eastern chamber of the Banbhore Mosque, however, do not warrant a spiral minaret, and the best that could be expected would have been a square minaret, probably tapering a little upward, to rise one or two storeys higher above the roof of the cloisters. The minaret of the Great Mosque of Kairouan,\(^3\) built in 9th Century A.D. is one of the oldest surviving square minarets, built in

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three sections with a small crowning cupola. The probable minaret of the Banbhore Mosque might have resembled this squat, stubby, square minaret of the early Abbasid Period.

As regards the Mihrab, it may be stated that it was unknown before the time of Al-Walid bin Abdul Malik, the Umayyad Caliph. Under him Umar bin Abdul Aziz, the Governor of Hijaz introduced for the time, in 707-9, a Mihrab in the form of a niche in the Prophet’s Mosque at Medina.¹ The believers are said to have resented at this innovation as it was a feature of churches. According to Suyuti, quoted by Creswell, the practice of making a Mihrab in the form of a niche was resisted in the beginning of the second century Hijrah. It is not certain when the practice was revived and Mihrab in the form of niche in the qibla wall became a common feature of all mosques.

The first dated inscription found in the Banbhore Mosque places its reconstruction in 239 A.H. (853-54 A.D.) nearly one and a half century after the introduction of the first Mihrab in the Prophet’s Mosque. If it is supposed that this Mosque was in use for a long period after the Mihrab became a common feature, it could be expected to have a Mihrab if it were to be identified as a mosque. Architecturally the qibla wall is given some sort of outward projection to accommodate the Mihrab. That projection is absent here, and the anomaly stands as the greatest argument against this building being a mosque. There are instances of mosques which have Mihrabs accommodated by making an enclave in the shape of a niche in the thickness of the qibla wall; and the qibla wall in the Banbhore Mosque, at any rate, had a maximum thickness of 4 ft. 9 inches, exceeding that of all other boundary walls.

In a general way the plan of the Banbhore Mosque bears close resemblance with that of the Umayyad mosques of Kufa and of Wasit, the difference being only in dimension.² In the mosque of Kufa rebuilt in 670 A.D.³ and of Wasit built in 702 A.D.⁴ there is no provision for the foundation of Mihrabs. Ibn Jubayr who saw the Mosque of Kufa in 1184, speaks of it as quoted by Creswell from de Goeje’s: ‘...... a vast mosque, the qibla side has five aisles, whereas the rest have two only; the aisles

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are supported by columns like masts, composed of hard blocks of stone superimposed piece by piece, bedded on lead, and not surmounted by arches; extremely high, they go up to the ceiling of the mosque. I have nowhere seen a mosque of which the columns are so long or the ceiling so elevated'.

The excavations at Wasit¹ have revealed the ground plan of a large mosque of square outline measuring 330 ft. square which rested on the virgin soil. It had five rows of eighteen columns on the qibla side, but one row only on the three other sides. There was no trace of any projection for the Mihrab² in the qibla wall. A number of sandstone pillars with Sassanian type decorations were also found. The walls and foundations consisted kiln baked bricks, varying in size from $12 \times 12 \times 11\frac{1}{2}$ inches to $23 \times 23 \times 5$ inches. The thickness of the walls was $7\frac{1}{2}$ ft. and the foundation projected $6\frac{1}{2}$ inches within and 4 inches without. On the walls were pilasters corresponding to each row of columns. The columnades had continuous foundations 5 ft. wide, running in both directions and forming a grid, the space between usually measuring $12\frac{1}{2}$ ft. by $11\frac{1}{4}$ ft. The first pavement consisted of soft red bricks set in rows parallel to the sides of the building. These descriptions of the early Iraqi type of mosque may be applicable to the Grand Mosque of Banbhore also, with a few minor exceptions.

After this detailed discussion of the remains of the Banbhore Mosque and the digressions into the stratigraphy and historical parallels we are in a position to make a phantom reconstruction of the Mosque as it stood in its last phase of existence. The average height of ordinary residential buildings in Banbhore,³ judging from the fallen material and thickness of walls, was 10-12 ft. above the street level. Assuming that the Mosque commanded a veneration, the superstructure of the building upon a conservative estimate would have been 15 ft. high on the side of cloisters and a little higher toward the prayer chamber, the roof supported on the wooden columns without the intermediary of arches. The probable minaret on the south eastern corner, upon the analogy of the square minaret of the Kairouan Mosque might have risen one or two storey higher above the roof level of the cloisters, with an internal staircase leading to its top. The main entrances on the northern and

² Fuad Safar, Wasit, Cairo, 1945, p. 20.
eastern sides were possibly built with frontons, projecting a little higher over the parapet level, and the protocol dated inscription might have been affixed above a possible arched gate on the outside. The roofs of the cloisters were perhaps covered with wooden planks resting on a grid of tie-beams and rafters, and covered over with a layer of clay. A small number of brick tiles found in the debris suggest that perhaps the roofs over the hujras were covered with them, as it would be likely in the face of evidence of stronger support given to these roofs by the partition walls dividing the hujras. To complete the picture of comfort in the hujras we may envisage presence of small arched windows in the boundary walls, some 5 ft. above the floor level, opening into the streets.

It is noteworthy that the amount of wood and brick tiles found in the debris was far less than would be required for the whole building. This scarcity may be due to the ravages which the mosque suffered at the hands of wayfarers during the last period of decay and dilapidation and also after the total abandonment of the site. In a semi-arid region like Sind building material like brick tiles and wooden logs are cherished booty to the shepherd and goth dwellers. There would be nothing surprising if such material was picked clean from the rubbles of the abandoned houses of Banbhore and the ruined mosque.

CONCLUSION

The square plan of the large building in the 'Central Sector' of the ruins of Banbhore is beyond doubt a remnant trace of a jami masjid which was founded soon after the advent of the Arabs in Sind. The mosque shows four clear phases of construction and repairs, and its earliest phase rests on the pre-Arab layers of occupation which show a complete break in ceramic and pottery types from those observed in the subsequent phases. The Kufic inscriptions and a few other circumstantial evidences completely rule out the doubt as to its being a Hindu or Buddhist temple, as some scholars of early Muslim architecture would contend on the basis of an apparent absence of the Mihrab projection in the qibla wall. The absence of Mihrab and discovery of sculptured stones with Hindu carvings do not prove it a temple or some other public building. The Mihrab might have been provided by cutting a niche in the centre of the qibla wall without giving it an outer projection, and the
sculptured stone pieces were obviously re-used from Hindu temples situated at some distance to the west of the mosque.

The presence of a Jami Mosque in a settlement indicates its social and political importance, and the ruined Banbhore of today is likely to have been the port city of Debal of the early 8th century where Muhammad bin Qasim gained the first foothold in the country of Sind. Names of places are prone to changes, being subject to historical events and cultural associations and a mix-up of public memory. Devalaya, Deval, Van Vihara, Ban Bihara, Banbhore are perhaps only a few christenings and rechristenings of the ancient port city of Sind, which might have been an upcoming sea-port in the time when the author of the Periplus of Erythraean Sea was compiling his great almanac. Still the verdict that Banbhore of today is Debal of yore would be premature to the thorough going scholar who has a suspicious bee in his bonnet upon the suggestions of Cunningham, Cousen, Haig and Raverty. To settle the issue finally it would be worth-while to make reconnaissance and excavations at the few other likely points of the location of Debal, along the old course of the Indus and in its Delta.
SIKH FRESCO PAINTINGS IN LAHORE FORT

(Plates XXVII—XXIX)

by

I. H. Nadiem

The art of fresco painting is very old and the Egyptians, Greeks and Romans were all familiar with it. In Pakistan, the excavations in Swat have revealed some of the earliest examples of fresco painting, belonging to the 3rd century A.C. The art has ever since been practised in different periods to depict different subjects.

Painting in fresco means painting on wet plaster with pigments mixed with egg, rice water or water and lime. As the liquid vehicle evaporates, the pigments are bound to the plaster.

Fresco painting can be divided into three types, mainly on the basis of the mode of preparation:—

(i) BUONO TYPE: Paintings of this type are set when the plaster is still loose so the pigments mixed with water or water and lime go deep into the skin and cannot be removed when dry unless the whole of the plaster is removed.

(ii) SECCO TYPE: In this type of fresco, the pigment is mixed with egg, or water and lime, as medium. The painting is worked out in the plaster set in place but kept wet by continuous applications of water.

(iii) TEMPERA TYPE: This is quick setting method in which rice water is used as a vehicle. As the colours are not able to go deep into the plaster owing to quick setting, this type of fresco is not so durable.

Perfection in the finish of fresco work requires a painter’s concentrated effort both physical and mental, during the execution. The techniques employed by a painter have been described by Bhai Giansingh Naqqash. A Khaka (اسب ) or drawing is prepared with pencil or charcoal
on thick paper. The drawing is then perforated with the utmost care to keep the perforation even and perfect. A small square of brick work on even-surfaced wall is then made wet and kept so by continuous sprinkling of water. The area so prepared is then plastered with lime. The process of plastering is called Pora. A curd-like residue, called Doga is prepared separately from burnt and drenched marble and cloth-filtered for fineness. Before the Doga is applied the Pora is plastered with rough residue of the cloth-filtered marble to make the lime plaster stronger and whiter. On the area prepared for painting the drawing is then cast by means of sprinkling charcoal dust through the perforated drawing which is held in contact with the plaster. While the ground is still wet, the work of distributing colours to different planes follows immediately. Thereafter, the colours are set into the plaster with the help of a small shovel with slight hunch in the middle. The shovel is kept constantly at work by hand, a process which requires undivided attention as the artists have to ensure setting in of the colours before the plaster is dry.

After establishing the original colours further colour-coatings are applied to bring out details to the required tones and to impart the final touches to the painting. The entire operation, however, requires that the area is kept wet throughout the process.

It is of interest to note here that the colours used in fresco paintings are not the popularly known water or oil colours. Fresco colours are specially prepared for this particular purpose from indigenous material. The indigenous clay, called Hurmachi, is used for preparing red while black is obtained by burning coconut shell into charcoal. The chips of Sang-e-Sabz are pulverized with water to obtain green colour and yellow is made from yellow clay. White comes from burnt marble dust.

In the Panjab plains, murals in somewhat rough style had been known to the Sikhs since the 18th century. The paintings of the early Pahari and Middle periods, i.e., until the first quarter of 19th century, bore Mughal influence. It was only during the second quarter of the 19th century that the painting of a truly Sikh nature appeared.

The frescos done then are mainly of the Secco type in which, as described above, water and lime is used as a vehicle. The frescos so far found in the Lahore Fort are good examples of this art as practised under the Sikhs.
In nature these paintings can broadly be divided into three categories:—

(i) Those depicting scenes from the life of Royalty and Royal processions.
(ii) Portraits, generally those of Royalty.
(iii) Scenes from Hindu mythology.

The frescos done during the Sikh reign are found in a number of buildings in the Lahore Fort which are as follows:—

(i) KHAWABGAH-E-SHAHJAHANI:

Built under the orders of Shah Jahan in 1633 A.C., the building was later used by the Sikhs as a residence for royalty when it was further decorated with mirror work laid in stucco tracery. The decorations were however covered during the British period when they plastered the entire exterior of the building. The Department of Archaeology, Government of Pakistan, undertook the task of relieving the building of all its superfluous structures and plaster. During the process, a number of fresco paintings were discovered. The most striking among these is the fresco depicting a typical Sikh Prince, sitting in a British-style chair, while his consort, on eastern-type chair offers him a cup of wine. The setting appears to be that of a pavilion on the first terrace of the Shalamar Garden with the trees of the second terrace in the background. A peacock and a few other birds depicted near the couple complete the mood of the scene (Plate XXVIII-a).

In the second room of the same building, a number of wall decorations in fresco and gold have been uncovered on removing the British period plaster and whitewash.

In the third room, on removing the plaster, frescos were exposed depicting scenes from Hindu mythology. The gaudy colour scheme suggests that they typically belong to the Sikh period. One of these paintings (Plate. XXIX) shows Krishna, the most important incarnation of Vishnu, playing the flute with a Gopi, or milk-maid, standing by. The god Krishna is standing on one foot with the other crossing his leg. He is wearing a long loin-cloth, called dhoti with only a piece of cloth round his neck. Both of his hands are on the flute with his face slightly turned towards the milk-maid. The woman is looking intently at his face. She is carrying a fan-like (?) object on her left shoulder and holding it with left hand. In her right hand, she holds some offering.
In the second uncovered fresco the god, Krishna, is depicted with a milk-maid in an amorous pose. The painting suggests that the artist has shown the same couple, described above, and it could have been a part of the story of Krishna painted in fresco. As the whole building has not been relieved of its superfluous plaster so far, nothing can yet be said with certainty.

(ii) ROYAL BATH ROOM IN JAHANGIR’S QUADRANGLE:

The room used as a bath-room during the Mughal period and then the Sikh period, was embellished with colour paintings in the latter. The British, however, used it as kitchen and plastered the whole surface, concealing all the decorations. Floral design paintings and frescos of female figures and winged angels holding a mirror (Plate XXVII) came to light when this plaster was removed by the Department of Archaeology, Pakistan. The female figure does not seem to represent any particular personage, but has been depicted simply to decorate the mirror to produce life. At most, it could be a maid standing upright and holding the mirror in front of the royal bather.

(iii) PAVILION IN JAHANGIR’S QUADRANGLE:

The small pavilion east of Jahangir’s sleeping chamber was also decorated in fresco by the Sikhs. The British, as in other cases, concealed them under whitewash. Some of these paintings have since been exposed. The painting depicting the hunting scene has not come out in a perfect state of preservation. The preserved hunting dogs and the colour scheme suggest its being of Sikh origin.

Inside the pavilion, a few other wall paintings do not seem to represent Sikh art. The scheme of these paintings suggests that they were executed during the British period.

(iv) SHAH BURT—SHISH MAHAL:

The long room opposite the Shish Mahal, was provided with fresco painting during the period when the Fort was occupied by the Sikhs. The British, however, concealed all the decorations with whitewash. The Department of Archaeology, Pakistan, during the process of conservation work was able to expose some of these paintings for which purpose the wall seems to have been divided into panels. In the upper panel of the paintings uncovered so far floral patterns with four birds have been depicted (Plate XXVIII-b). The lower panels, considerably larger
in area, depict scenes from Hindu mythology, mainly about the god Vishnu who is held to have appeared in many incarnations including some in animal or half animal forms such as fish or tortoise.

In one of these paintings, the dark-complexioned god Vishnu with his crown is depicted as a half-fish, his four arms bearing his emblems, the conch, disc, mace and lotus flower. On one side, stands a man wearing a crown holding a flower and on the other, a woman with an offering (?). The water shown under the fish represents the great ocean.

The other lower panel is also decorated with a floral design which forms the setting of the painting, as in the first case, so that it appears to be in an alcove. In this painting the four-armed Vishnu is depicted emerging from a lotus flower to rule the world. The snake, mythologically with thousand heads, on whom the god rests before reappearing from the lotus flower, is shown being held by six men, three of them on the right and the same number on left. The men on the left are dark-complexioned persons wearing horns while the men on the right have been shown differently. The bearded man on the immediate right wears three faces with a crown on his head. The second, a boy-like figure, wears a snake round his neck and another snake-like depiction is that of his hair. The third man resembles the first bearded man with the difference that he has only one face. On the left of the god sits a bearded man with a bow in hand while on the other side a man and a woman have been painted in praying attitude. A ram-like animal appears above the heads of the couple.

(v) ROSHNAI GATE:

The southern side of the gate is decorated with Sikh period paintings depicting floral designs and some figures. The paintings, difficult of access, could not be studied thoroughly and a careful examination is needed to recognise the personages depicted in them. On the northern side of the gate, however, a fresco, depicting a partial view of Guru Nanak Sahib, is visible.

In addition to the fresco paintings enumerated above, it is certain that many more are still concealed under the whitewash or plaster applied by the British in different buildings of the Lahore Fort alone. If it becomes possible to recover them in their true form there would be enough material in these buildings alone to give a vivid picture of the art of fresco painting patronized by the Sikh chiefs during the nineteenth century.
NEW ARCHAEOLOGICAL DISCOVERIES
IN EAST PAKISTAN*

by

A. K. M. Amzad Hossain Mian

Archaeologically, East Pakistan is still largely terra incognita. This is partly due to the fact that it was not accessible easily. Before independence, the only large scale excavation was done at Paharpur and sporadic excavation was conducted at Mahasthangarh. After Alexander Cunningham, no systematic archaeological exploration was undertaken in this part of country. After independence, it was expected that adequate attention would be given by our Government, to unfold an important chapter in our history. Unfortunately, nothing of importance was done in this respect, and only recently, the Government of Pakistan has begun to take a real keen interest in preserving our national culture and past heritage. People could now think about their status in the cultural field among the comity of nations and they are giving serious attention to their glorious past and feel proud in having one of the most ancient civilisation in the world. With the increased allocation of funds to the Eastern Circle of the Department of Archaeology and consequent increase in number of officers in this region, it is possible to undertake, though on a small scale, a systematic exploration of the area hitherto untouched by any archaeologist. The result of such exploration is the discovery of ruins of considerable importance, including the mound of Sitakot in Dinajpur district.

About 4 miles north-east of Chorkai railway station on the broad-gauge main line of the P.E.R., and about 2 miles north-west of Nowab-pong, thana headquarters of Dinajpur district, lies the small and unimportant village of Fatehpur Marash. In this village and in its environs, there are some places of antiquarian interest with some ancient mounds of considerable value. Of all the historical and ancient sites, Sitakunda, or Sitakot as it is popularly known, is important in many respects. It is

* In spite of our best efforts, we could not get any illustration for this paper from East Pakistan Circle, Dacca.—[Ed.]
a quadrangular mound of bricks, surrounding an inner courtyard, which is termed by Mr. Strong a small tank,¹ has been noticed and attracted the attention of many eminent scholars and travellers. According to legend, this was the abode of Sita, the heroine of the great epic, Ramayana, during her banishment from the court of Rama, her consort, the purity of her character being suspect. She stayed here with the saint and poet, Valmiki Muni, and gave birth to twin sons—Lava and Kusha. Tarpanghat, on the western bank of the river Karatoya, in Nowabgong village, and a group of three mounds locally known as ‘Pathsala’ (school) of Lava and Kusha (some furlongs east of Nowabgong) are still pointed out by the people—the former as the place where Valmiki bathed and performed religious rites and the latter as the seminary of the two sons of Sita. Whatever may be the legend, from the formation of the present mound under discussion it appears that it contains the remains of a medium sized monastery and may be the ruin of one of the many Buddhist monasteries mentioned by the famous Chinese traveller and pilgrim, Hiuen Tsang, who visited Pundra Vardhan, between 639-645 A.D. It has been established that the modern Dinajpur district was within the Pundra Vandhan Bhukti of ancient period.

The mound of Sitakot, or Sitakunda, with its legend, poses many questions. How old are the remains it preserves and what was the nature and duration of its occupation? Here, the first thorough survey, with a view to excavation, was undertaken in the early part of 1968 and after investigation and examination, it was decided to lay two long cross trenches to examine the feature of the mound and to study the sequence chronologically. The test excavation at Sitakot brought to light cultural materials and evidence which will greatly widen our scope in studying the history of this hitherto unknown monastery and the people connected with it. The small scale digging operation have revealed the presence of important structural remains and a number of important objects which may help us to determine the date of this monument. Beyond doubt, after a short season’s field work, a fairly clear picture has emerged of a Buddhist monastery. The uncovered remains of the monastery include the major part of the main gateway in the northern arm, the guard and reception rooms of the gateway, a few cells, part of a corridor, a ring well in the courtyard and almost all the outer face of the boundary walls except a part of the south-east corner.

¹ District Gazetteer, Dinajpur.
The remains of the monastery and its associated structures, built of burnt bricks, were found badly damaged and disturbed. The boundary walls, as well as other walls of the monastery, have bulged out from the main structure and parts of some of them have collapsed to floor level. This may suggest some sort of a heavy earth tremor which may have caused these walls to bulge from the main building or this destruction might have been done deliberately by hostile persons ultimately resulting in the collapse of the building. At places, bricks were found removed from the structure. It was reported that these disturbances were caused by the brick hunters and while uprooting sal trees people cut trenches and thereby disturbed the structures. Traces of later additions, alterations and repairs are visible everywhere in excavated parts of the building. The general character of the structures is their solidity and massiveness. The outer walls of the monastery are about nine feet in thickness and their surviving height ranges from 1 feet to 3 feet from excavation level. The outer face of the monastery shows shallow projections at regular intervals. This was probably adopted to break the monotony of the plain ashlar brick work.

This year’s operation brought to light a hitherto unknown monastery in this part of the country. It exposes the outline of the monastery enclosing an inner courtyard which roughly measures 215 feet square, externally. From the available evidence, it appears that the monastery was provided with a spacious entrance from the north. The main gateway was flanked on either side by guard rooms, measuring 14'-9" × 12' at the outer face and reception rooms on the inner side. The guard rooms gradually decrease in measurement at the northern end and, at present, no indication of a door passage is traceable. Excavation revealed that the reception rooms, which formed part of the monastic cells, were provided with two door passages, one connecting the main entrance and the other leads to the corridor facing the inner courtyard of the monastery. During the earliest period, the reception rooms have a well-laid plastered bedstead(?) all along the partition walls. The concreting of the bedstead was done on top of two courses of brick soling.

It is estimated that there are about 40 cells in the monastery. Of the cells excavated so far, the largest measures 13' × 11'-9" and the smallest, 11'-10" × 11'-2". The partition walls of these cells are more than 3 feet wide. The facade wall of the cells measures 5'-9" thick. All the cells have
been provided with a door passage connecting the cell with an inner corridor running along the monastery. This corridor, facing the inner courtyard, has a 4' wide railing with a course of moulded bricks on top. No indication of a column base, which might have been used for supporting the roof is observed. In the cells of the monastery, in addition to the discovery of valuable finds, very interesting features have been observed. From the excavated cells, it appears that the partition wall and the back wall of most of the cells have been provided with corbelled niches of the Salban Vihara and Paharpur type. Some of the niches are found to have been bricked up at a later period. These niches might have been used for keeping votive images, oil lamps, articles of daily use and for reading and writing materials also. One of the excavated cells in the eastern arm of the monastery contained two successive brick platforms, one upon the other, which undoubtedly had something to do with worship or ceremonial. The appearance of two successive platforms in that cell indicates its importance and it might have some relation with ritual or religious activities, perhaps being used as a ritual chamber as we have seen in other monasteries in the Indo-Pak sub-continent. There is evidence to believe that the cells underwent some repair which may extend to at least three periods. These rebuilding or repairing periods are clearly marked by successive floor levels, walls passing through the door passage, bricking up of door passages and the construction of the new thresholds. In almost all the excavated cells heavy lumps of concrete apparently having fallen from the collapsed roof are found superimposed on debris of the fallen wall. In some of the cells, signs of burning were observed and the inside walls of this period showed black soot marks. Should we think that fire broke out in these cells only or does it indicate that there was a large scale fire in the monastery at this particular level? Was it done by hostile persons which resulted in the abandonment of the monastery? History of this area supports this conjecture. We know that Bengal was the last stronghold of Buddhism and it continued to flourish until the fall of the Palas with a temporary setback during the time of the Sasankas. After the great Palas, the Senas and the Varmnas, two sectarian Hindu dynasties, came into power in two different regions of Bengal. Almost all the monasteries of Bengal had to be abandoned during this period either due to the non-availability of royal grants and support, or due to the hostile activities of the revivalist militant Hindus who were always intolerant of other religions.
No structural remains, excepting a terracotta ring well, has so far been encountered in the inner courtyard of the monastery; though a large number of cultural objects have been collected. The ring well (2'-1' dia) was found associated with the earliest period of the monastery. This may have supplied drinking water to the people of this Buddhist institution in its early stage. At a later period this well was abandoned and filled up with debris and refuse.

**Important Finds**

Apart from a large collection of pottery of various types, the monastery of Sitakot has yielded a few important antiquities of considerable interest. These include bronze images, objects of stone and iron, terracotta plaques and carved bricks.

A large number of plain, decorated, thick and thin textured pink and grey potsherds were collected in course of excavation. Except for a number of pieces of N.B.P. ware, there were no basic differences in texturing and types of the pottery recovered from different layers and they were of utilitarian type. Sherds include necks, rims, bases and other body fragments of cooking pots, storage jars, bowls, water pitchers, cups and other household pottery used by the people of the monastery in everyday life. Some of them were found decorated with incised designs such as grids, herring bone and rope impressions at the bottom. In some cases, soot marks were also observed at the bottom and a few of the potsherds contain a red slip on a thin outer surface.

The discovery of the famous N.B.P. ware at the lower level of the monastery is very important. After Mahasthangarh in Bogra district, this is the second site in East Pakistan from where we are finding fragments of N.B.P. ware. The almost complete fragments of a bowl were found *in situ* on the floor of (3) in one of the excavated cells. A number of pieces were also recovered from layer (4). All the N.B.P. sherds have a lustrous, glossy, shining surface. They are fine grained, thin textured and wheel made. Apart from Mahasthangarh and the site under discussion, almost all the ancient sites of the Gangetic basin including Ahichhatra, Nalanda, Berachampa, Bangarh and Tamralipti have yielded this famous type of pottery. Usually this N.B.P. ware was associated with Mauryan and Sunga periods. Thus, the discovery of this particular type of pottery may help us to determine the period and age of this monastery. It may
even corroborate the account of Hiuen Tsang who narrated that the Emperor Asoka had built many stupas and sanghrams in Bengal to commemorate the visit of the Lord Buddha in that area. However, unless we can obtain more parallel examples in this site, it is not possible to draw any conclusion from this single find. It must be further added that it was generally believed that the technique of manufacturing this special type of ware suddenly disappeared or died out after the 1st century B.C. After studying the stratigraphical records and the specimens of N.B.P. ware from Mahasthangarh, as well as from the available evidence of the present excavation, it seems that this was not the case. Northern black polished ware declined gradually and it survived in Bengal at least upto the advent of the Palas, though in a lesser degree and in a deteriorated and inferior form. Even in some cases, it is very difficult to differentiate it from grey pottery having a black slip on the surface. However, the question remains open to scholars and has not yet been settled conclusively.

**BRONZE IMAGE**

Probably, the most important of finds are bronze images. Of the statues, images of ‘Bodhisattva Padmapani’ and ‘Bodhisattva Manjusri’ deserve special mention. The ‘Bodhisattva Padmapani’ sits in ‘Latitasana’ pose in which his right leg is pendant and rests on another lotus and the folded left leg rests on the throne of ‘Vismapadma’ with the right hand in ‘Varada Mudra’. The left hand rests on the throne with which he holds a lotus, the filament of which looks more like a stupa (?). The hair is tied up in the form of ‘Jata mukuta’ and curly hair falls on the shoulders. It appears, that no ornaments are worn except an ornamental girdle. The stele is beautifully and tastefully decorated with a non-descriptive device on the edge and a row of beads encircled by parallel bands of lines on either side. It is surmounted by a flower with five petals representing ‘Pancha Tathagatas’. At the back of the stele there is a small circular seal bearing probably the Buddhist creed *viz.*, “Ye dharma......... Mahasramanah”.

The ‘Bodhisattva Manjusri’ sits in ‘Maharajalilsana’ (one of the forms of ‘Sukasana’) on a double petalled lotus throne which in turn was placed on a terraced pedestal. With the right hand a half blown lotus is held and the arm is placed downward on the raised right knee. The left hand rests on the seat and holds a lotus stalk. On top of the lotus
which is raised upto the shoulder level of the deity, the folded manuscript of 'Prajnaparamita' could be identified easily. The god is profusely decorated with ornaments and wears a peculiar head-dress. The hair is curled and is found spreading over both shoulders. The 'Upavita' (sacred thread) passes over the left shoulder. The almost circular stela is beautifully and tastefully decorated with a merlon (?) on the edge and beads and parallel bands in the circle. A circular seal with usual Buddhist creed is observed at the back of the stela.

Unlike Salban Vihara specimens, where round a stela is rarely met with, the Sitakot bronze images have been provided with stela almost circular in shape in the form of 'Prohavali'. In execution and decoration it closely resembles the bronze specimens of Nalanda and probably has a close affinity with that period rather Salban Vihara proto-type. It is very difficult to say when the art of casting bronze images developed in the Eastern India. Though many parallel bronze specimens are being found in ancient sites of Eastern India, yet after Nalanda, Salban Vihara in Comilla district has yielded a larger number of bronze sculptures indicating the existence of a flourishing school of bronze-casting in Bengal. The specimens from Sitakot appear to be superior to the Salban Vihara, type in technique, in scheme of ornamentation of the stela and in the artistic execution.

IRON OBJECTS

Iron objects include nails, sockets, clamps and some other implements of everyday use. Almost all the iron nails and clamps have been recovered from near the door passages of the cells, which suggests that they were used for joining the wooden door jambs and frames. No indication of decayed wood has so far been detected in the door sils or elsewhere.

CARVED BRICKS

The burnt bricks used in constructing this monastery vary in size and shape and a difference in burning has also been observed. Apart from the plain bricks used in masonry, Sitakot monastery also yielded a satisfactory number of specimens of dressed, moulded and ornamental bricks. These moulded and carved bricks might have been used for decorating both the outer and inner surfaces of the building. The most used devices are the dental edges and lotus petal. Some of the bricks have
floral designs on the edge instead of on the flat surface. From the available evidence, it indicate that the scheme of a complete floral design was executed on the edges of several bricks and when assembled together, they conveyed the idea of a flower. However, on some of the bricks, complete flower with four petals encircling a round or rectangular filament have been executed, but the execution is quite unimpressive, inferior and was done half-heartedly. This work could not stand comparison with the specimens of Paharpur and Salban Vihara. For example, at Sitakot the lotus petal design was indicated only by a few incised lines to convey some idea of a lotus petal. Should we think that this was the beginning of a tradition of decorating the building with terracotta ornamentation which reached its climax during the Pala period? At present, we can study the gradual evolution of terracotta sculptural art in East Pakistan, beginning from the Mauryan and Sunga period, if not earlier, but it is very difficult to ascertain chronologically, when the method of decorating the edifice with such terracotta ornamentation started here. The examples of Paharpur, Salban Vihara and elsewhere represented a period when this system attained its maturity and reached its highest peak. At present, in the Sitakot monastery, no ornamental brick is found in situ, so their method of use cannot be said with certainty.

The list will be incomplete, if no mention is made of two copper coins of early British period. They were collected from the top soil in the course of excavation. It is reported by local people even very recently, Hindus used to visit this place as being sacred on the occasion of ‘Baruni Snan’—a yearly bathing ceremonial at Tarpanghat on the west bank of river Karatoya in the month of March—offered coins as a mark of respect. This may account for the discovery.

In the light of what is now written, it may be assumed that the mound of Sitakot possesses immense value and importance. Further evidence is sure to be revealed by the spade with systematic large scale excavation of the mound. It should throw more light on the historical, cultural and religious aspects of the people of the region and it may unfold a hitherto unknown chapter in the history of East Pakistan.
STONE SCULPTURES FROM NORTH BENGAL
(ANCIENT VARENDRA)

(Plates XXX—XXXV)

by

A. A. Farooq,

INTRODUCTION

The northern part of East Pakistan was called Pundravardhana in ancient times, of which Varendra or Barind was the "mandala" or district. The modern districts of Bogra, Rangpur, Dinajpur, Rajshahi, and Malda (Part of which is now in Rajshahi district, but major portion is in India) were included in Varendra.

The author of Ramacharita eulogised it as the "crest jewel of the earth" and "the land of holiness and bliss". The land was considered as the holiest by reason of the sacred flowing channels of the Ganges and the Karatoya on its either sides. The traditional boundaries of Varendra, says F. J. Manhan, "Are the Mahananda on the west and Karatoya on its east."

The scholars have divergent views as and when the images were modelled as cult of worship in Varendra. But since the art of image making was closely associated with the forms of worship, it might have developed in the remote past. Unfortunately, the early sculptors used perishable material for this purpose. As a result, not a single stone image so far discovered from this area can be placed prior to the Gupta period. Even in that period few specimen are met with.

EVOLUTION OF STYLE

The iconoplastie art of Varendra as represented by the extant figurines in stone, bronze and terracotta was fully developed during the Pala-Sena periods, extending from 8th to 12th century A.D. "The art-form during these four long centuries proceeds in a wavering line; sometimes favour-
ing a fleshly form frankly sensuous, sometimes an abstract form equally sensuous, not frankly but suggestively, both tendencies working within the strict rigours of canonical tradition. The art seems to have derived its charm and peculiar character from an oscillation between the reality of the flesh and the reality of abstraction, perhaps between two minds, one deeply imbued with the "sadhana" of the Tantra that knows this physical body to be abode of heavenly bliss, and the other aspiring to abstract the godliness in man out of his material body itself, the ideal (sadhana) of Brahmanical Hinduism. In striking contrast to this ideological oscillation between two tendencies, is the gradual evolution of the composition. It begins with quiet simple flexions and attitude of the body and simple decorations and ornamentation; but with progress of time the flexions and attitudes of the body become excited and agitated, decorations and ornamentations, playful and frivolous. This tendency from simple and quiet to agitated and frivolous general appearance, proceeds in a steady straight course." (History of Bengal Vol. I pp. 546.)

INDIGENOUS SCHOOL OF ART

The Tibetan historian Lama Taranath mentions the names of two artists of 9th Century, Dhiman and Vitapalo, who established an indigenous school of art. Apart from these two celebrated artists, several sculptors engraved inscription on stones and perhaps made stone and metal images. Some of them have the designation of "silpis". The chief of the "silpis" in Varendra was Ranaka Sulapani. The artists exercised their craftsmanship and revealed their personal religious feelings in the shape of objects of art in a living manner.

The factors contributing towards the establishment of the art of Bengal were the patronage of the ruling dynasties, the wealthy class of worshippers and finally the artists who formed a group in the society to earn their livelihood. Sometimes the artists were holding high posts.

MAIN GROUP OF BRAHMANICAL HINDU IMAGES

The Gupta period saw the diffusion of the Vedic culture through the medium of Brahmanical Hinduism. But the Hinduism of the Gupta era took a new shape, in which the Vedic gods were replaced by the Puranic divinities. The new popular female deities, Durga, Laksmi, Sarasvati, Manasa and Ganga were modelled instead of Aditi, Kuhu, Raka and Prithivi. The Brahmanical sculptures of Varendra can be grouped as under.
Icons of Gods

1. Images connected with Visnu cult, *i.e.*, his ten incarnatory forms, and his mount, Garuda.

2. Saiva images including his various aspects, his carrier, Nandi, dancing and seated figurines of Ganesha, Kartikeya astride on peacock back.

3. Images associated with Surya, his son Revanta and Navagrahas (Nine planets).

4. Images of other Hindu minor gods.

Icons of goddesses

1. Cult of Durga including various forms along with different varieties known with different names of the Devi.

2. Manasa and Sadyojata group.


The entire range of the stone sculptures discussed in this report are carved on stela. The stela formation fully developed in 8th Century A.D. The shape of the stela is half-round at the top. Specimen with pointed end at the top as well as flat topped were also discovered.

Among the icons on stela, the central image occupies the middle of the entire composition with the accompanying accessories. With the development of art, the figurines, particularly the main deity become almost independent of the stela. The main deity is flanked by attendant divinities and other figurines which are carved on separate lotus pedestals, smaller in size and lower grades in relief. The back of the stela is exquisitively decorated and the “Kirtimukha” is more conspicuous at the top centre of the stela. The “Gandharvas” are shown flying in the midst of cloud motifs in playful manner.

Last but not the least, a probable date can be assigned to any image while judging the details of the jewellery and the treatment of the drapery. But a definite date can only be assigned, if the image contains inscription. But the sculptures with inscription indicating the construction date of objects are very rare. I discovered only two images during the course of my exploration which bear inscription. One of them is standing multi-handed Visnu and other image of “Mother and child”.
Catalogue of Sculptures

1. Image of Visnu¹ riding on Garuda in black stone, \(31^\circ \times 15\frac{1}{4}\)" was found at Kurapara, P.S. Mahadevpur, Distt., Rajshahi. Of the four hands of the god, the upper left hand is damaged. He holds lotus, conch-shell and mace in the remaining three hands. The god is seated on the shoulders of his mount, who kneels on his right leg. He is accompanied by his two wives, Sarasvati and Lakshmi holding harp and fly-whisk respectively. By their sides, again, stand two door-keepers Jaya and Vijaya. The representation of Kinnara and his wife near the two shoulders of the god are remarkable. The stela shows rich decoration of centaur-upon-elephant on the two perpendicular sides with Kirtimukha sign at the top. The lotus coils and donors in ‘anjali’ pose are carved on the pedestal.

2. The Garudasana image in black stone, \(40^\circ \times 20^\circ\) was recovered from Paroil within P.S. Raninager, District Rajshahi. Garuda, the mount of the Visnu kneels on right leg on a lotus pedestal. The god sits on his shoulders with both legs pendant. The carrier has two hands and support the pendant legs of the god. He is attended by his two wives on either side. The stela shows decoration of centaur-upon-elephant and Kirtimukha sign sculptured at the top. The four hands holding the attributes are damaged.

3. Image of standing four-handed Visnu in black stone, \(27^\circ \times 13\frac{1}{4}\)". The god is beautifully bedecked with jewellery including vanamala. He is flanked by his two wives Sri and Pushti. He holds his usual attributes in his four hands clockwise, lotus, mace, wheel and conch-shell. The centaur-upon-elephant design is exhibited on two perpendicular sides of the stone slab. The Garuda, "Vahana", of the god is carved in the lower pedestal along with other donors. Kirtimukha sign is figured on the top. Found from Biheegram, P.S. Adamdighi, District Bogra.

The ancient iconographical text like the Rupamandana lay down that Visnu image should carry four “ayudhas” in its four hands, namely sankha, chakra, gada and padma (Elements of Hindu Iconography Vol. I, Part I, p. 279).

¹ VISNU is spelled as “VISNU” and not “VISHNU” by N. K. Bhattasalli.
4. Visnu image carved on black stone, $29^\circ \times 14\frac{1}{2}^\circ$. The god is holding attributes in his lower and upper left and upper and lower right hands are respectively conch-shell, wheel, mace and lotus. He is attended by his two wives. Centaur-upon-elephant decoration is represented on two sides of the stone slab. Gandharvas are shown flying with garlands in their hands care-free in the clouds on the top layer of the slab.\(^1\) Kirtimukha sign is displayed at the top. His mount, Garuda, is figured on the pedestal. The image was discovered from Bulihar within Naogaon P. S. of District Rajshahi.

5. Image of Visnu in black stone, $39^\circ \times 20\frac{1}{2}^\circ$. He is holding his usual attributes and accompanied by his two wives. The centaur-upon-elephant decoration is exhibited on two sides of the slab. Kirtimukha sign is executed at the top. The lower layer of the pedestal shows decoration but not his mount, Garuda. The image was found from Dukhin Hotshohr, P.S. Khetlal, District Bogra.

6. Image of Visnu in black stone, $13^\circ \times 6\frac{1}{2}^\circ$. The left natural hand of the god holding conch-shell is damaged. Kirtimukha sign is sculptured at the top. The pedestal contains a line of inscription. The image was found from Kashira, P.S. Adamdighi, District Bogra.

7. Image of Garuda, mount of Visnu in brownish stone, $34^\circ \times 23^\circ$, was found from Joypur Dangapara, P.S. Mahadevpur, District Rajshahi. The image is represented kneeling on the right knee on a lotus throne with folded hands placed on the bosom. He has two wings, human nose and round eyes. His locks of hair has been gracefully shown. The execution is comparatively inferior to the other specimen presently at Dacca Museum.

8. The artistically carved slab of Visnupatta in black stone is $5\frac{1}{4}^\circ \times 5\frac{3}{4}^\circ$ in size. The figures are carved in low relief both on obverse and reverse. The obverse is divided into nine compartments as represented below:

<table>
<thead>
<tr>
<th>Obverse</th>
<th>Image of Sri sitting cross-legged on a lotus seat. The two elephants are pouring water from either side.</th>
<th>A flower with four petals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A flower with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>four petals.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) The grinning lion-face shown usually on the top centre of the Stela.
Ganga standing under a trefoil arch on a makara. | Image of Visnu with right leg pendant on a lotus holding his usual attributes in four hands. | Yamuna standing under a trefoil arch on tortoise.  
A flower with four petals. | Garuda with folded hands and foliate pattern. | A flower with four petals.  

**REVERSE**

The ten incarnatory forms of Visnu are depicted in following order. Fish, tortoise, the man-lion, the dwarf, Rama, Parsu-rama, Bala-rama Buddha and Kalki.

9. The black stone image of goddess Sarasvati,\(^1\) 28\(\times\)14\(\) was recovered from Kirohi, P.S. Adamdighi, Bogra. The image has four hands. Her front hands play on a harp. The additional right and left hands hold rosary and book respectively. The goddess sits in "Laltisana" pose and her right leg rests on a ram\(^2\) her mount. Some elaborate coils of lotus stalks are carved on the pedestal. The "vina" is partially broken. Kirtimukha sign is figured at the top.

10. Image of Gauri in black stone, 23\(\times\)10\(\). She holds in her back upper hands trident and linga, while in right lower a rosary. The left normal hand is damaged. She is attended by two female on her either side with garlands in their hands. Centaur-upon-elephant decoration is exhibited on two perpendicular sides and Kirtimukha sign is displayed at the top. Her "Vahana" lion is seen on the pedestal. The image was found from Madhi Nager, P.S. Joypur Hot, Bogra.

11. Image of Gauri in black stone, 14\(\times\)7\(\). The goddess carries on her back upper hands linga and trident. The two natural hands are damaged. She is accompanied by two female on her either side. Her vehicle, lion, is depicted on the pedestal. Found from Adamdighi, District Bogra.

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\(^1\) She has various other names, such as Vaka, Vagadevi, Vagisvari, Bhatri Vant, etc., etc., (Iconography of Buddhist and Brahmanical mythology, by N. K. Bhattacharji).

\(^2\) The vahana of the goddess carved on the pedestal is in some cases a swan, her usual mount in other parts of India, but in other, a frisking ram. The explanation of the second vehicle is perhaps afforded by a mythological story in "Sathapratha Brahma" closely associating rams and ewes with Sarasvati. (History of Bengal, Vol. I, p. 440. C.f. Bhatt-cat 118-190, Plate LXIII, where reference is made to ram-fight and ram sacrifice on the occasion of Sarasvari-Puja.)
12. A rare stone image of goddess Parvati, 40'' × 20'', standing in a trefoiled arch. The four hands of the deity are damaged and lost. Kartikeya and Ganesha, are being shown along with their respective remnants of double headed lions and deers respectively. Stela represents temple decoration. Centaur-upon-elephant device is exhibited on two perpendicular sides of the stone slab. The vehicle, of the goddess; alligator, is carved on the pedestal. The image is in good state of preservation except it sustained few injuries. Found from Snoil, P.S. Adamdighi, District Bogra.

13. The two handed deity in black stone, 40'' × 20'' is shown in "laltisana" pose on a lotus throne. The right hand of the goddess is in "Vardha mudra", while the left hand carries a baby.¹ The images of Ganesha, Kartikeya and Linga are carved respectively near the shoulders and on top of the central image. She is flanked by two chowrey-bearers female attendants on either side. Kirtimukha sign is displayed at the top. Her mount, lion, is carved on the pedestal. A well-executed piece of sculpture and in good state of preservation. Found from Moroil, P.S. Bogra Saddar, District Bogra.

14. A composite representation of Visnu and Siva² known Harihara³ in black stone is 23'' × 10\frac{1}{2}''. The four handed deity is standing on a lotus throne. The god holds in his left and right natural hands a conch-shell and rosary respectively. While in his additional left and right hands a mace and trident. A "vanamala" is shown reaching down the knees. He is attended by two female standing in "Abhya mudra" pose. The centaur-upon-elephant design is exhibited on two perpendicular side with Kirtimukha sign at the top. The execution of Kinnara and his wife near the two shoulders of god is noteworthy. The mount of both the gods i.e., half-bird Garuda, and "Nandi" have been depicted on the pedestal.

¹ The goddess with a baby on her left arm may be identified as Ambika, a name of Durga. (Elements of Hindu Iconography).

² She is also called Chandika, Katyayani, Sulini, Bhuadrukali, Vindhayavasin and by various other names, (Iconography of Brahanamical and Buddhist sculptures by N.K. Bhattasalil, p. 195).

³ A step further was taken by seeking to unite Visnu with Siva. After the development of the Puranic form of religion, Visnu and Siva became the two most popular deities and their worshippers came to be known as Vaisnavas and Saivas. Each of these sect considered its god to be superior to that of the other and to allay the bitterness rising thereupon the forms of Haribhara. According to Sanskrit authorities Haribhara should be Siva in the right half and Visnu in the left. (The sculptures from Sgradrio by Urmila Agarwala).

³ Hari meaning Visnu and Hara Siva was conceived of. He is commonly known as Balaji in the North and Venkalesa in South India, (G.N. Rao, Vol. I, Part I, p. 270).
15. The gigantic image of “Nandi”, vehicle of Siva is elegantly carved in black stone. The bull is seated on a rectangular shaped foot-board. The anatomical details have been depicted tastefully. The image is a fine specimen for the elegance of its modelling and the graceful contours of the body. Size 24" × 13" × 19". Found from Bulihar, P.S. Naogaon, District Rajshahi.

16. Image of bull, the mount of Siva in black stone, 9" × 4½" × 7". The image is placed on a rectangular foot-board. The image shows a dignified balance. Found from Mahadevpur, District Rajshahi.

17. The greyish black stone image of Hara-Gauri is 39" × 21", found at Kasba within Naogaon sub-division of District Rajshahi. The goddess with a circular mirror in her left hand and right hand placed on the right shoulder of her consort is seated on the left thigh of Siva. The god touches in amorous style the chin and breast of goddess with his right and left hands respectively. While his additional hands carry lotus and trident. Their respective mounts, bull and lion are carved in the bottom layer of the pedestal. Stela shows the temple decoration and centaur-upon-elephant design on the two sides of slab. The artistic excellence, the playfulness of the rich decoration and the treatment of the drapery leads to conclude that the sculpture dates back to 11th-12th Century A.D.

18. Uma-Mahesvara stone image, 15" × 7½", was found from Mahadevpur, District Rajshahi. The composite icon of Siva is carved on a rectangular stone slab: The god touches the chin of his consort, Uma, with his right normal hand, while the left hand is placed under her left breast. The goddess is seated on the left thigh of Mahesvara. She holds round shaped mirror in her left hand. The right one is placed on the shoulder of her consort. Kirtimukha sign is executed at the top. The carriers of both the god and goddess Nandi and lion, are depicted on the pedestal.

19. Alingana-Murti in black stone, 15" × 10". The upper portion of the stela is broken, but the principal figures are intact. The god Siva has four hands. On his left thigh is placed his consort, Gauri. The right hand of Siva touches the chin and left slightly touches her left breast.
While the additional right and left hand of god hold lotus and trident respectively. The right hand of Gauri is placed on the shoulder of her consort and left holding circular mirror. The pedestal contains the lion, bull and donors. Found from Raikhali, P.S. Adamdighi, District Bogra.

20. Alingana-Murti in black stone, $22^\circ \times 11^\circ$. The god Siva and goddess Parvati are shown on a lotus throne under a trefoiled arch. The god touches the chin of his consort in amorous style, while his right hand touches the breasts of Devi slightly. His back hands carry trident and lotus. Ganesha and Kartikeya are placed on the top right and left sections of the stone slab. The mount of god and goddess bull and lion respectively have been depicted on the pedestal. Found from Koshuta within P.S. Khetlal, District Bogra.

21. Image of Sadyojata $^1$ commonly known as “Mother and child” in black stone, $27^\circ \times 11^\circ$ was found from Mithal within P.S. Adamdighi of District Bogra. The goddess lying on a couch with the left hand under her head and right one holding a baby. A divine baby lies on the left side of the Devi. The legs of the lady are placed, bent one over the other. A female attendant is shampooing the left feet of the goddess. Two other standing female figurines are carved outside the couch. With “chamra” and fan. The images of gods Ganesha, Kartikeya, linga and nine planets are figured at the top of the central image. The image is in good state of preservation.

22. Image of “Mother and Child” in black stone, $41^\circ \times 20\frac{1}{4}^\circ$. The goddess reclining on a couch with a baby on her left side. She is attended by two standing female figurines carved outside the couch. A maiden is shampooing the feet of goddess Parvati. The images of Kartikeya, Ganesha, linga and navagrahas are placed above the central deity. The image is in good state of preservation except the right hand of the goddess is damaged. Found from Joypur Dangapara, P.S. Mahadevpur, District Rajshahi.

23. The Sadyojata stone image carved in black stone, $35^\circ \times 16^\circ$, was found from Shibgong, District Bogra. The lady is lying on a couch gracefully having a maiden shampooing her left leg. The baby lying on her left side is shown touching her breast slightly. Two female deities

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$^1$ Sadyojata means 'a child just born', one just arrived from the other world and yet unsoiled and untainted by contamination with this world. These images exactly represent the idea conveyed by the word Sadyojata. (Iconography of Buddhist and Brahanical sculptures by N. K. Bhattasalli p. 137).
standing on lotus throne are figured outside the couch with "chamra" in their hand. The images of Kartikeya, Ganesha, linga and nine planets are displayed at the top of central image. The image sustained injuries and the figures of Kartikeya, linga and the maid servant standing outside the couch are damaged. The image was broken and afterward joined together with a cement frame.

24. The unique image of Sadyojata, 26" × 13" was found from Kosham Shahr, within P.S. Khetlal of District Bogra. The lady is reclining on a couch with a baby on her left side. A female maiden is shampooing the left leg of the deity. Two figures are executed outside the couch with "chamra" and fan in their hand. Linga, Kartikeya and Ganesha on the top of the image. A cross-legged female and a donor in "Anjali" pose is shown below the couch. The image contains three lines of inscription on the stone slab. The facial details of central image are damaged. Besides this the image also sustained injury causing in chipping off two to three words of inscription.

25. Ganesha with elephant head, dwarfish form and pot-bellied in black stone is 26" × 12". The deity is shown in dancing attitude on a lotus throne and has eight hands. The right tusk is truncated, but the left is entire. Of the eight hands of the god, the right ones hold the axe and assurance pose, the third right hand is missing. While the left ones radish, snake and pot of sweetmeat, from which the god is seen relishing with the help of his trunk. Just on the top of the pointed stela, four mangoes¹ in a bunch with leaves are depicted. His mount, rat, is carved on the right side of the pedestal. Found from Kashira, P.S. Adamdighi, District Bogra.

26. Image of Ganesha in "Maharaja-lila" posture, 20" × 11". The god is placed on a pedestal. He carries in his upper back hands a radish with leaves and axe. In his left natural hand a tray of sweetmeats, which the god is taking with his trunk. The coils of lotus and his "Vahana" rat is figured at the pedestal. The rat is looking very eagerly at his master. The right side of the stela is damaged, but the principal image is intact. Found from Hotshohr, P.S. Khetlal, District Bogra.

¹ The fruits to be found on so many Ganesha images of Bengal are most probably symbolical of the fruit or success in any enterprise which is the result of the proper propitiation of the god named 'the bestower of success' (siddhi-data). (History of Bengal, Vol. I, p. 448).
27. Two armed stone image of Subrahmanya is shown standing on a lotus throne with spear in his right hand and left resting upon the hip (Katyavalambita pose). The goddess Devaseana or Valli? is shown as a developed maiden on the right side of her consort. Her right hand is broken and lost, the left hand carries a jewel casket. The peacock, mount of Kartikeya is carved below the lotus pedestal. The “vahana” of Kartikeya’s consort is too worn out to be unrecognizable. A dish of sweetmeat is placed on stand shown on the lower layer of the stela. The stone slab shows no decoration at all. The right corner of the stone slab is damaged. Size 47" × 25". Found from Biheegram, P.S. Adamdighi, Bogra. The image is rare and perhaps recovered first time in East Pakistan.

28. A sadly mutilated image of Kartikeya in black stone was found from Akhira, P.S. Mahadevpur, District Rajshahi. The god is seated in the “Maharaja-lila” posture on the back of peacock, his mount. The attributes of his hands are so worn away as to be unrecognizable. The traces of centaur-upon-elephant decoration on two sides of slab are to be seen. Certainly striking piece of sculpture, when intact. Size 12" × 13".

29. Upper portion of Rudra-Chamunda in black stone, 16" × 9." The goddess has eight arms with sunken eyes, dried up flesh, keeping little finger on her lips and wearing a necklace of human skulls. The parasol with three human figurines on the top of the pointed stela is conspicuous. Lower portion is damaged and lost. Found from Alipur, P.S. Mahadevpur, District Rajshahi.

30. The goddess Manasa in black stone, 13" × 7½". The hood of the seven snake is intact. The lower portion of stela is damaged and lost. From Raikali, P.S. Adamdighi. District Bogra.

31. Image of Mahismardini in black stone, 26" × 10" was found from Bandagram, within P.S. Raninager of District Rajshahi. The ten handed image is shown in “Pratyliida” pose and fighting with the “assura” coming out of a decapitated buffalo. She is piercing the demon with trident while holding her tuft of hair. She is attended by a fighting

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1 Subrahmanya with two or four arms is said to be capable of giving “siddhi” to his worship, (Elements of Hindu Iconography by Gopinath Rao, Vol. II, part II, p. 426).
2 Subrahmanya is almost exclusively a south Indian deity. In Bengal it is stated that he is worshipped by disreputable women on certain grounds, (Elements of Hindu Iconography, by G. N. Rao, Vol. II, Part II, p. 415).
3 Standing pose, just the reverse of “alidha”.
4 Demon
male and female figure on her left and right side respectively. Two gandharvas with garland flying in care-free manner on the top section of stela. A flower is executed on the top of the stone slab instead of Kirtimukha. Few coils of lotus and donors with folded handed are carved on the pedestal.

32. An artistically carved image or Brahma in black stone, $14'' \times 71''$ was found from Bulihar, within Naogaon P.S. of District Rajshahi. The three-headed pot-bellied deity with four hands is shown in “Laltisana” posture on a lotus seat. His mount, goose is carved on the pedestal. He carries in his natural hands “akashmala” and ghee pot, while in his additional hands “sruk”\(^1\) and “sruva”.\(^2\) He is attended by two female figurines on his either side. The female carved on right and left side hold “chamra” and “vina” respectively. The top of the stela is damaged and lost.

33. Three faced stone image of Brahma, $21'' \times 101/2''$. The deity is shown sitting on a lotus throne with right leg dangling. He is carrying his usual attributes in his four hands. The left upper is damaged. His “vahana” goose with beaded string is carved on the pedestal. He is flanked on either side by attendants. The most conspicuous feature of the image is that he wears beard, which made the image as most important. Kirtimukha sign is sculptured at the top. From Kashira, P.S. Adamdighi, District Bogra.

34. Image of Surya or Sun-god standing erect, carved in coarse-grained stone, $34'' \times 12''$, was found from Mahespur within P.S. Mahadevpur, District Rajshahi. The deity carries blossomed lotus held by the stalk in each hand. He is flanked by two attendants figurine on each side known Pingala and Dandi. The image wears high boots\(^3\) and a sacred thread. The features of the god are flat and wears low head dress. His car is drawn by seven horses with charioteer Aruna. The stela represents plain design. The simplicity of the whole composition of the image corresponds to the images placed in Gupta period.

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\(^1\) Sacrificial ladle for taking out clarified butter from the pot.

\(^2\) A sacrificial ladle for pouring clarified butter on the fire.

\(^3\) The Matsya-purana, after recounting how the feet of the Sun-god were left unfinished by Visvakarma, add (page 31, Vangavasi Ed.):—“So, in the matter of the worship of the Sun, no one anywhere fashions his feet. If it is done, it gives leprous. In picture, as well as in images placed in temples, the devotee should carefully refrain from conceiving the feet of the Sun-god.” The Brhat-Samhita also directs that the body of the sun-god should be hidden up to the thighs or the breast. (Iconography of Buddhist and Brahmanical Sculptures, by N. K. Bhattasali, p. 157).
35. Image of Surya in black stone $39^\circ \times 19\frac{1}{2}^\circ$ shows the development in the treatment of iconic type. The number of attendant has increased. Besides Pingala and Dandi, two female figurines and two arrow-shooting goddesses appear as accessories. The sun-god holds two lotus stalk surmounted by two full bloom lotuses. The goddesses Usha and Pratyusha on either extreme side of the main deity are seen discharging arrows. Centaur-upon-elephant decoration is exhibited on two sides of the stone slab. Kirtimukha sign is figured at the top. The pedestal shows the chariot drawn by seven horses. Two hands of the central image are damaged otherwise in good state of preservation. From Alipur, P.S. Mahadevpur, District Rajshahi.

36. Image of sun-god in black stone, $39^\circ \times 19\frac{1}{2}^\circ$. The deity holds in his hands two stalk of full-blossomed lotus. To the right of the god stands a lady with fly-whisk in her right hand and a fat-bellied bearded man carrying pen and ink stand in his hands. On his left is figured Dandi. The chariot drawn by seven horses is beautifully carved on the lower layer of the slab. Kirtimukha sign is carved at the top. From Botahil, P.S. Adamdighi, District Bogra.

37. Image of Surya in black stone, 1' 5" in height was found from Khetlal, District Bogra. The god stands erect in his car. The two wives of Surya Surenu and Niksubha stand on left and right side of the god respectively. The half bird Aruna is driving chariot of seven horses. The centaur-upon-elephant design is exhibited on the two perpendicular sides of the stone slab. The top layer is damaged and lost.
CONSERVATION OF THE HIRAN MINAR AND BARADARI
AT
SHEIKHUPURA
(Plates XXXVI—XL)

by
Ahmad Nabi Khan

About twenty five miles north-west of Lahore, the capital of West Pakistan, is situated an old town called Sheikhupura. During the days of the Mughal Emperor, Akbar (1556-1605 A.D.) it was one of the parganas of the Sarkar of beth Jalandhur doab. Abul Fazl, however, records it as Shaikhpur. According to Sujan Rai Bhandari, the town is said to have been named after the Mughal emperor Jahangir (1605-1627 A.D.) who was affectionately called ‘Sheikhu Baba’ by his illustrious father, the emperor Akbar. However, Jahangir himself names it Jahangirpur and Jahangir’abad in his Tuzuk, where we find it mentioned at two places. Similarly, Mulla ‘Abd-Al-Hamid Lahauri names it Jahangir’abad. The compiler of the Imperial Gazetteer of India, however, records without quoting any authority, that the name of Sheikhupura is said to have been derived from the name of Prince Dara Shukoh, the grandson of Jahangir, who it is said had connected the town by a cut with the Aik rivulet. It seems, therefore, probable that the old name of Jahangirpur or Jahangir’abad, as recorded by Emperor Jahangir and Mulla ‘Abd al-Hamid Lahauri, might have changed it to Sheikhupura during the days of Dara Shukoh when he was the governor of Lahore.

2 Bhandari Sujan Rai, Khulasat al-Tawarikh, edited by Maulvi Zafar Hasan, Delhi, 1918, p. 453.
6 Imperial Gazetteer of India, Oxford, 1908, Vol. XXII, p. 270. The statement of the Gazetteer that ‘both tank and buildings are the work of Dara Shukoh’ is, however, incorrect.
Sheikhupura. Hiran Minar. General view of the tank and monuments
a. Sheikhpura. Hiran Minar. Head of antelope in situ

b. Lahore Fort. Tile mosaic work showing an antelope (Mansraj ?)
a. Sheikhpura. Hiran Minar. The causeway

b. Sheikhpura. Hiran Minar. South-east corner pavilion
Sheikhupura. Hiran Minar, before conservation
Sheikhupura. Hiran Minar, after conservation
Sheikhupura. Hiran Minar. Main Gateway: 

a. before conservation  
b. after conservation
Lalbagh Fort, Dacca. Audience Hall (Fort Museum):

a. before conservation  b. after conservation
Lalbagh Fort, Southern Gate:  

a. before conservation  
b. after conservation
Paharpur. Satyapur Bhita. Votive stupas:  
a. before conservation 
b. after conservation
Paharpur. Satyapir Bhita stupas: a. before conservation  
b. after conservation
Bagerhat. Bibi Beguni Mosque: a. before conservation  b. after conservation
Bagerhat, District Khulna. Ron Vijaypur Mosque:  a. before conservation
b. after conservation
a. Dacca. Sat Masjid, before conservation

b. Dacca. Sat Masjid, after conservation

a. National Museum, Karachi. Diorama depicting life in Mohenjodaro 5,000 years ago

a. Archaeological Museum, Mohenjodaro

b. Ethnological Museum, Chittagong
Here in this historic town, about two and a half miles away from the Railway Station is situated a tall and majestic tower called Hiran Minar and the daulat Khana, a baradari, in the centre of a big tank, both erected under the orders of Jahangir in about 1015 A.H./1607 A.D., and in 1030 A.H./1620 A.D., respectively. The emperor himself records about the erection of the tower in his memoirs:

Translation: On Tuesday (the 12th Ziq’a’dah, 1015 A.H./31st March, 1607 A.D.) the royal standards alighted at Jahangirpur, which is one of my fixed hunting places. In this neighbourhood had been erected by my order a manar at the head of the grave of an antelope called Mansaraj, which was without equal in fights with tame antelopes and in hunting wild ones. On a stone of that Manar was carved this prose composition, written by Mulla Muhammad Hussain of Kashmir who was the chief of the elegant writers of the day: “In this enchanting place an antelope came into the world-holding (Jahan-giri) net of the God knowing ruler Nur al-Din Jahangir Padshah. In the space of one month, having overcome his desert fierceness, he became the head of the special antelopes.” On account of the rare quality of this antelope, I commanded that no person should hunt the deer of this plain, and that their flesh should be to Hindus and Muhammadans as is the flesh of cows and pigs. They made the grave-stone in the shape of an antelope.

ARCHITECTURE

The complex of buildings erected at Sheikhpura under the orders of Jahangir and modified afterwards by the architects of Shahjahan (1628-57 A.D.), is somewhat exceptional in the history of Mughal architecture. Here, in this royal hunting resort, we find an expression of the

1 Tuzuk-i-Jahangir, op. cit., p. 44.
personality of the Emperor embibed who created this ensemble of buildings for his recreation. The high minar served very well for the purpose of providing a clear view of the surrounding area for locating game, while the fabulous baradari in the midst of a large tank fulfilled the need of an ideal place for recreation (Plate XXXVI).

THE HIRAN MINAR

The minar is circular in shape and is tapers towards the top (Plates XXXIX—XL) and (Fig. 29). Its diameter at the base is 33 feet and at the top 23 feet, while its height is 102 feet 9 inches. The top is flat having a parapet wall, 2 feet and 9 inches high. There is no indication that there was originally a pavilion over it.

There are 210 square holes on the outer surface of the minar, arranged regularly in 14 rows (Plates XXXIX—XL). The purpose of these holes cannot be determined precisely. Several theories have been advanced by archaeologists and art historians, some of which assert that these were used for hanging the heads of hunted animals, a curious hunting tradition among the early Mughal sovereigns of the sub-continent. The other suggestion is that these were only meant to be used as nests by wild birds.\(^1\) A spiral staircase consisting of 108 steps, each measuring \(4'\times9\frac{1}{2}''\times1.3''\) has been provided inside the minar. Alongside the staircase, there are, 11 ascending rectangular arched openings provided for air and light. From these ventilations there is a good view of the tank, the baradari and the surrounding area.

The minar has been constructed with country bricks laid in kankar lime mortar. It is divided into six tiers of different heights. The lowest tier is octagonal in plan and decorated with panels, while the others are circular. The third tier has a small octagonal room. The base of each tier has projected moulding and the lowest tier has an arched opening for entrance. The entire exterior as well as interior of the minar has lime plaster, apparently with some floral or lineal fresco paintings. The thick lime plaster applied over the surface of the lowest tier has been divided into decorative panels of arched niches and horizontal bands in high relief.

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\(^1\) C.f. Ahmad Rabbani, ‘Hiran Munara at Sheikhupura (Punjab)’, in Armughan-e-Ilmi (a Presentation Volume to Professor Maulvi Mohammad Shafi) Lahore, 1955, p. 181, sqq. The article discusses the probable use of these holes and compares the Minar with Munara-i-Shakh at Isfahan. The details of architectural elements of the monument given in the article are to be read and taken with caution.
Detail South Elevation of Hiran Minar

Fig. 29
Around the base of the minar, are the remains of structures, but it is difficult now to determine their exact nature. It may be surmised that the remains represent a verandah with regular arched openings, a usual feature of such minars built elsewhere, specially in Iran. Here is said to have been the grave of the famous antelope of Jahangir, Mansraj with its unusual inscription which was, according to the Emperor, composed and transcribed by one of his court’s master artists and calligraphists, Mulla Muhammad Hussain Kashmiri. Nothing of this inscribed sculpture of antelope and the grave is now preserved. But, in 1959, when some diggings were carried out at the base of the minar to expose the structural remains for the purpose of conservation, a head of an antelope made of red sandstone was discovered from the debris at a depth of about 3 feet (Plate XXXVII.a). Broken and slightly damaged, the head may be taken as that of the effigy of the antelope which Emperor Jahangir ordered to be made and placed on the spot.

Two more contemporary portraits of an antelope are known which can be regarded as that of the same Mansraj. The first is executed in a panel of tile mosaics fixed on the exterior surface of the northern fortification wall of the Lahore Fort. Here, the royal antelope is shown fully caparisoned together with its attendants standing in the midst of a jungle symbolized by a few plants in the background. The presence of an attendant and the symbolic forest show that the animal is nothing but a decoy. The portrait may in most probability be that of Mansraj as the date of the execution of these tile mosaics corresponds substantially to the short period when Mansraj remained in the royal service.

Other contemporary evidence has been afforded by a unique miniature painting of an antelope, executed by Manohar, one of the court painters of Jahangir. The painting shows a prince, probably young Jahangir, leading his antelope—Mansraj(?). The painting is a part of the Wantage Bequest and is now preserved in the Victoria and Albert Museum, London (Plate XXXVII.b).

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1 "See p. 2, infra.
2 This has been pointed out by Mr. Muhammad Waliullah, Khan in one of his un-published articles.
3 Chaghata'i, Dr. 'Abdallah, “In Memory of an antelope” published in the Pakistan Times, Lahore dated the 27th December, 1953. The miniature painting reproduced here has been taken from a fresh photograph obtained from the Victoria and Albert Museum for which the author of this article is grateful to the authorities of the Museum.
A close examination of the two portraits and the red sandstone head shows that most probably these represent one and the same antelope Mansraj.

THE TANK AND THE CORNER PAVILIONS  

(Fig. 30)

Facing the grand minar on its east about 275 feet, is a big tank with a causeway (Plate XXXVIII.a) leading to the octagonal baradari built in its centre. There is a square pavilion at each corner with a gateway to the baradari on the north west. The tank is rectangular in shape, measuring 895 feet 6 inches long and 752 feet broad. Each side of the tank has a ramp, 65 feet 4 inches wide, flanked by four staircases of 8 steps (7 feet 6 inches wide) leading to the water. The purpose of this ramp, constructed in brick on edge masonry, seems to have been to allow the wild animals easy access to water in order to quench their thirst. The tank has been provided with a parapet wall of 3 feet 6 inches height on all its four sides.

The four corner pavilions are square in plan and measure 18 feet by 18 feet and have low pyramidal roofs (Plate XXXVIII.b). The pavilions have full length arched openings on their four sides and an eave (chhajja) supported by broad brackets made of brick. A number of small flat, arched niches have been created in the interior. The surface was finished with limeplaster and decorated with fresco paintings. The inside dado is painted and polished in red with a broad yellow and black border. The apex of the soffit possesses an intricate floral pattern in red, yellow and green, while the squinches have likewise decorative roundals with floral patterns. Two stair-cases consisting of 8 steps each lead to the water from the two sides of the pavilions.

At present, the tank receives supplies of water through a small channel taking off from the Sheikhupura Rajbaha and connected with the tank from its eastern ramp. During the Mughal days, however, the channel was cut from the Aik rivulet and connected with the tank at its north west corner. In addition, an elaborate system for filling up the tank with rain water from the catchment area was devised by means of feeding channels and small filtration tanks constructed in the south west, south east and north east corners of the tank. These channels have now disappeared, except the remains of one on the south western side which gives a fairly good idea of the system.
Fig. 30
THE MAIN GATEWAY AND THE CAUSEWAY

The main gateway to the baradari is a rectangular vestibule, measuring 34 feet by 22 feet 6 inches, with a pointed arched gateway flanked by four other similar but smaller openings, built one upon the other (Plate XLI.a & b). Inside the vestibule, are two platforms, 3 feet 2 inches high, covering the area on either side of the main entrance. The inner walls have been decorated with recessed niches, while the soffit of the dome shaped ceiling has a honey-comb decoration. The two flights of 14 steps constructed at both the corners lead to the roof. The outer and inner surface has been plastered in the usual way and decorated with fresco paintings, particularly at the front of the entrance.

A causeway, standing on 21 pointed arched pillars, connects the main baradari with the gateway. It is 308 feet 8 inches long and 10 feet 6 inches broad with a parapet one foot eight inches high, running along both the sides. A square shaped projected platform measuring 23 feet 7 inches by 23 feet 7 inches has been provided in the centre of the causeway.

THE BARADARI (THE DAULAT KHANA)

In the centre of the tank has been erected an octagonal platform with a low parapet wall on all sides. Over the platform stands the beautiful baradari in the same plan. The baradari was also constructed under the orders of the Emperor Jahangir in 1030 A.H./1620 A.D. for use as a royal residence. He records in his Tuzuk:

"روز دو شبہ بست و نجم در جرگه مکتبہ بد، نشاط شکار کردم. ازاگا بنے منزل شکار، جب انگیر آباد مخیم بارگھ دولت گزیدہ در زیان شاهزادگی ایں سر منزل بیس شکار، کہ بنو بیبام خود دیبی آباد ساختہ و مخصوص عمارتی بنا نیاہتہ، کہ سکندر مین کہ از قراوان کنکیک بود حوالہ نموذج. وی بعد از جلوس برگھ ساخیدہ سویڈیلی الیہ لطف، فرودس و حکم کردم کہ عمارتی بجہت دولت خانہ و تالائی و سنار اساس سازند و بعد از فوت ان برگھ بجاگی ادارت خان مقرر شد و سربراهی عمارت به مشاہ، الیہ باز گشت درین ولاحسن انجام بذیرفتہ، ان تکف تالائی شد، باغات و سر و میان تال عمارت دلشین بیبیم بجہت یک لک و بچہ نزاع، ہزار روہی صرف عمارت این جا جا آورد، ہند او برادکاہنہ شکار، چکیا سے و جمعہ مقام کرہد از انواع شکار محظوظ شدہ،

Translation: "On Monday the 25th I hunted with much enjoyment in the hunting ring of Makhiyala then in ten stages. I encamped at the stage of the hunting-place of Jahangirabad. Afterwards, I founded a village with my own name, and after erecting a small building, placed

it in charge of Sikandar Mu'in, who was one of my best huntsmen. After I came to the throne, I made a pargana of it, and bestowed it as a jagir on him. I gave an order they should construct there a building as a royal residence with a tank and a minaret (Manara). After his death this pargana was given in jagir to Iradat Khan and the charge of the buildings was given to him. It has now been handsomely completed. Undoubtedly the tank was very broad, and buildings here cost Rs. 1,50,000/-. Really it is a kingly hunting place.\(^1\)

Later, during the reign of Shahjahan (1628-1657 A.D.) the baradari was renovated and some modifications to its structure carried out. With these renovations, the baradari received a new and more impressive aspect. It has been recorded that Shahjahan visited the place as many as four times during his reign.\(^2\) The same author gives a detailed account of the first royal visit, apparently after his proposed alterations and modifications. The event took place on the 23rd Shawwal 1043 A.H./22nd April, 1634 A.D.

Translation: On the 23rd (Shawwal 1043 A.H./22nd April, 1634 A.D., the Emperor) proceeded for hunting to Jahangirabad which is known as 'Hiran Munara'. The place is situated in the vicinity of the Daral-Saltanat (of Lahore) and has the appointed (royal) hunting resort. (The emperor) stayed at this 'pleasure-house' for three days and then returned to Lahore. As this hunting resort is much more pleasant and has more hunting animals than any other place, and that the buildings constructed during the time of Hazrat Jannat Makani (paradise abode) were not considered upto the mark, the Emperor (Shahjahan) ordered that another more beautiful and impressive building should be constructed. (The building) was completed at a cost of 80,000 rupees.\(^4\)

\(^1\) This word has been variously copied and interpreted. The Persian text of the Tuzuk edited by Syed Ahmad Khan reads بکع، while Beveridge infers 'Mankiyala' and identified it with the famous Mankiyala in Rawalpindi district where is situated the celebrated Buddhist stupa. The identification is not very plausible especially because of the long distance between Sheikhpura and Mankiyala. The word may be read more conveniently as مُکَّـیْـیَـلَا (makhliyah) an oasis.


The baradari, measuring 58 feet 3 inches by 58 feet 3 inches is a two storied building with an open octagonal pavilion on the top resting on arched pillars and crowned with a cupola. The main octagonal room on the ground floor measures 19 feet 3 inches by 19 feet 2 inches and is surrounded by eight inter-communicated square and oblong rooms with flat vaulted roofs and flat topped openings (Fig. 30).

The interior surface is finished with highly polished lime plaster and panelled with recessed niches. The surface has fresco decoration in green and crimson and the floor is paved with slabs of red sandstone. A flight of 14 steps leads to the second storey which has the same plan as the first, but an open verandah with 24 flat arched openings runs all around it.

Over the top of the second storey is an octagonal pavilion measuring 22 feet by 22 feet with a domed roof and a corbelled eave. As usual, it has eight openings with multifoil arches. The multifoil cusps have been added later, probably during the days of Shahjahan.

The surface of the baradari both exterior and interior, has finely finished and polished lime plaster, tastefully decorated with fresco paintings. The dado has a floral band running on its border while the flat roofs of the corridor are decorated with a beautifully executed and intricate palmette. Likewise, a scroll of floral pattern runs along the parapet. The main colours used in these decorations are yellow, crimson red, black, green and blue. The decoration, also, was probably executed by the order of Shahjahan. Some of the fresco paintings in the baradari and the corner pavilions are of later period when it was under the occupation of the Sikh rulers. Ranjit Singh (1786-1839 A.D.) awarded Sheikhupura in the jagir of his second wife, Raj Kaur, commonly known as Ma’i Nakkain, whom he married in 1798 A.D.¹ Ma’i Nakkain maintained semi-royal state in the Sheikhupura Fort.²

CONSERVATION AND RESTORATION

Due to their obvious importance as fine examples of the Mughal architecture, the Hiran Minar and Baradari were declared protected under the Ancient Monuments Preservation Act of 1904 in the year 1916.³

³ Vide, The Revenue Department, Punjab Government Notification No. 289, dated 26th April, 1916.
The monuments were placed in the 1(A) category and therefore came under the control of the then Archaeological Survey of India for preservation and maintenance. After the protection of these monuments, the Archaeological Survey of India adopted measures for their conservation. We find the following account of these measures in the official report of the Survey:

The works achieved comprised, among other items, the rebuilding of the walls of the great tank where they had collapsed through inundation and the ensuing subsidence of the adjacent ground; the rebuilding of the greater part of one of the corner baradaris; minor repairs to the central pavilion in the tanks and its causeway approach; and the repair of the dilapidated steps ascending the tall manara or tower. A simple iron railing has also been placed around the top of the later as a protection to visitors viewing the site from this vantage point. In conserving this old fabric endeavour has been made to preserve the old character of the monument by keeping the repairs as inconspicuous as possible.\(^1\)

After the establishment of Pakistan, due attention was paid towards the proper maintenance of these monuments and since 1947, more than Rs. 55,000 have been spent on them. In 1959-60, it was decided to undertake thorough conservation of the monuments to check their further deterioration. The structure of the Minar, the tank and the baradari was thoroughly examined for this purpose and an exhaustive conservation note prepared. An estimate costing to Rs. 1,03,472.00 was framed. According to these estimates, the following measures of conservation have so far been taken.

**THE HIRAN MINAR**

The Minar had lost almost all the its finely polished lime-plaster from its outer as well as inner surface. The patches left over were decayed and worn out and, therefore, beyond repairs. The bare structure had started showing signs of disintegration at places, specially the brick masonry at the base had decayed considerably.

According to the orthodox principles of archaeological conservation, the missing lime plaster was not to be restored and the structure left bare after pointing the open jointed masonry and edging off the remaining

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patches of plaster. A deviation to this rule was, however, made as climatic, conditions had started effecting the brick structure of the minar adversely. It was feared that if the structure was left bare after pointing the stray patches of plaster, the brick masonry would crumble and disintegrate. To save the monument from further deterioration, it was decided that the entire surface should be treated carefully by replacing the old and decayed bricks with new ones of the same size and quality. After strengthening the structure in this way, the entire surface was provided with lime plaster strictly similar to the original. Due care was taken to preserve the intact original patches of plaster as much as possible.

The spiral of steps inside the minar showed much wear and tear; a number of bricks from the steps were either missing, shattered or replaced with modern bricks. These steps were repaired thoroughly by using first class country bricks of original size in kankar lime mortar.

THE MAIN GATEWAY

The overall condition of the gateway to the baradari was structurally fair except that the lime plaster once applied to its surface, both exterior and interior, had decayed and had fallen away leaving bare patches here and there (Plates XLI.a & b). The deteriorating condition at the soffit of the central dome and the side walls was more serious. The plastered surface had some beautiful fresco paintings in floral patterns, traces of which still exist. Keeping in view the circumstances related above, it was decided that the original plaster and painting should be restored to the extent of the bare parts of the structure. The old patches of the plaster, which were strong and sound, were preserved along with the new.

While the work of restoration of the plaster was in progress, an interesting and important point was brought to light. Beneath the plaster, another layer of similar plaster, finished but un-painted, was detected. The evidence showed that originally these buildings had un-painted plaster, but later on, probably of Shahjahan's time, these had frescoed plaster. The fact corroborates the statement of Mulla 'Abd al-Hamid Lahauri that the monument was renovated during the period of Shahjahan at a cost of Rs. 80,000. It appears that the original lime plaster of Jahangir's time was not provided with fresco paintings.

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1 Generally, four types of brick tiles of the following sizes have been used for the construction of the monuments:
   (1) 9\(\times\)5\(\frac{1}{4}\)\(\times\)14\(\frac{1}{4}\)
   (2) 8\(\frac{1}{4}\)\(\times\)5\(\times\)1
   (3) 8\(\frac{1}{4}\)\(\times\)6\(\times\)14\(\frac{1}{4}\)
   (4) 8\(\times\)5\(\frac{1}{4}\)\(\times\)14

2 See above p. 244.
The various openings of the main entrance were provided with iron grated doors for safety reasons and some other petty repairs were carried out on floors. Voids in the structure and replacement of decayed and crumbled masonry with new materials, were also executed.

**THE BARADARI**

The structure of the baradari was found to be in a fair state of preservation except that the brick work of the core was badly decayed at a number of places, both in the interior and exterior. Some portions of the eave (chajja) of the small pavilion at the top had also decayed and had fallen. The lime plaster was also affected badly by adverse atmospheric conditions and big patches of decayed plaster had fallen down in several places, especially from the parapet and the shell of the dome. Similarly, the plaster of the interior had either crumbled and fallen down or had become weak. The floor inside were provided with stone slabs, but many were found missing and the remained were considerably damaged. The outer surface of the platform had also become damaged and almost completely devoid of plaster.

To save it from further deterioration, it was decided to strengthen the structure by replacing the missing or decayed bricks with new ones of original size and by under-pinning the weak masonry. The missing parts of the eave (chhajja) were repaired and the missing patches of plaster were restored with decorative fresco paintings done exactly in the original shade of colour taking due care that the extant old patches and the colour decoration were left intact. The work of restoring the colour decoration was carried out by skilled artisans brought over from Chiniot, renowned for its fresco painters for centuries.

The roof of the verandah of the first floor was found to be damaged and leaking badly. It was therefore replaced and finished according to the original scheme. The roof of the second floor was repaired during the early 19th century and provided with slabs of red sandstone. Through the passage of time, the joints between the two slabs had become loose allowing percolation of rain water. The slabs were therefore replaced by a floor of kankar lime concrete.

The process of archaeological conservation must obviously be very slow and painstaking as it has to be carried out strictly in accordance with the original scheme. To ensure such precision, every precaution
must be taken in the use of material and the artisans chosen. During the last five years, we have been able to complete the work on the Minar, the main entrance and a great deal of the baradari. On these operations, a sum of Rs. 1,20,759.00 has been spent so far. The restoration and conservation of the old structure of channels, the tank with its enclosing walls, the ramps, the corner pavilions, the terraced platforms around the tank and the overall improvement of the surrounding open areas is yet to be carried out. A study of the present condition of these parts of the entire monument and the measures for their conservation and restoration will be of interest and the comprehensive estimates prepared by the Circle include all these items.

THE FEEDING CHANNELS

As has been described earlier, only the dilapidated structure of one of these channels exists now but there remains however, indicate the elaborate and comprehensive system for the accumulation of rain water in the small, successive filtration tanks, which is unique in the architectural achievements of the Imperial Mughals. It is of the utmost interest to conserve the remaining structure to give at least an idea of the system to the general visitor. The side walls of the channel are broken at places while the dilapidated filtration tank is filled with silt and debris. It is proposed that the masonry of the side walls of the channel and the missing plaster of the tank should be restored and the channels cleared of all silt and rubbish. There are indications of such feeding channels constructed on the north-east, and south-east and southeast corners of the tank, but no traces of these are visible on the ground. It will be worthwhile to trace these channels and bring them again to view.

THE CORNER PAVILIONS

The overall condition of the structure of these corner pavilions is fairly good, except that some parts of the masonry especially at their bases and the arches have decayed and most of the eaves (chhajjas) of the pavilions have been damaged. The north-east pavilion has lost part of its eave (chhajja) on the north and the entire length on the south and west. This is to be repaired and restored with interlocked brick work according to the original. Similarly, cracks have been noticed in the arch of the north eastern pavilion which is to be properly grouted with cement mortar and finished with a top dressing.
The lime plaster on the interior and exterior of these pavilions has decayed considerably and fallen at various places leaving the surface bare. This not only detracts from the original beauty of the pavilions but causes deterioration to the exposed masonry. The floor of the pavilion had been provided with lime terracing which has become loose and rough. All the missing plaster will have to be restored and the floor strengthened according to the original scheme. Some patches of the plaster being weak and damaged, have fallen, leaving the brick masonry bare. It is proposed to provide lime plaster to these patches and an attempt will be made to restore the missing parts of painting to match the adjoining space.

PLATFORMS, SIDE WALLS AND RAMPS OF THE TANK

The terraced platforms of the main tank have been damaged and cracks have been noticed at several places in their lime concrete flooring. All these cracks are to be opened, properly grouted and filled. The shattered flooring of the platforms has to be restored in kankar lime concrete strengthened with cement. The decayed bricks and plaster are also to be treated by replacing the damaged bricks with new bricks of original size laid in kankar lime mortar.

The brick on edge masonry of the ramp has also become badly open-jointed and a considerably large number of bricks decayed. These bricks are to be replaced with new of the original size and pointed with kankar lime mortar.

These are the measures proposed to be adopted to restore the various parts of the monuments. After it is done, the monument will at least have some of its original grandeur and a new lease of life.
CONSERVATION, EAST PAKISTAN CIRCLE*

(Plates XLII—XLVIII)

CONSERVATION DURING 1967-69

In addition to the maintenance and upkeep of museums, the conservation of protected monuments and excavated archaeological remains is the main responsibility of this Circle. The Circle has 108 sites and monuments under its control and, as far as possible, there is a regular programme to maintain and preserve them. However, absence of a proper approach to most of the monuments, unfavourable weather conditions almost throughout the year, the lack of trained labour required for executing certain conservation work of a specialised nature, non-availability of building material essential for undertaking conservation, particularly original size bricks, are some of the more serious handicaps to the carrying out of conservation work.

As it is not possible to concentrate on every protected site and monument simultaneously, due to a lack of funds and a shortage of technical staff, however, phased programmes are chalked out by the Circle periodically and priorities fixed, keeping in view the relative significance of each site and monuments.

During the period under report, the conservation work was executed at Lal Bagh Fort, Dacca; Bibi Beguni’s Mosque, Bagerhat, Khulna; Ranbijoypur Mosque Bagerhat, Khulna; Nine-domed Mosque, Bagerhat, Khulna; Satyapir Bhita, Paharpur, Rajshahi; Paharpur Monastery, Rajshahi; Idrakpur Fort, Munshiganj and Hajiganj Fort, Narayanganj.

LAL BAGH FORT

This magnificent Fort, located in the thickly populated old city of Dacca, occupies a place of unparalleled importance among the Mughal monuments of East Pakistan and it attracts a large number of tourists. Its imposing Northern and Southern Gateways and the fortification wall

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*The material for this report was received from the Superintendent of Archaeology, (Dr. Nazimuddin Ahmad), E.P.C., Dacca—[Ed.]
have successfully withstood the ravages of the monsoon for about two hundred ninety years, but the damage to the original structure remains were considerable. The protective lime-surkhī plaster coating on the surfaces had perished in most places. The brick masonry had given way leaving, voids and cavities on the faces of walls and the beautiful Ghalibkari work in the interior had in places either fallen or had greatly disintegrated.

All this required extensive restoration work in order to preserve these splendid Mughal remains. To achieve this, a comprehensive scheme was prepared which provided for surkhī lime plaster punning with shell lime, brick soling and lime washing. Special repairs under this scheme have since been done to the exterior as well as interior of the elegant South gateway, a part of the south and western fortification wall and the south-western corner bastion of the Fort.

**BIBI BEGUNI MOSQUE**

This beautiful little mosque has recently been protected under the Antiquities Act. It is built in the typical Khan Jahani style of the 15th century A.D., and is conspicuous for its stupendous dome, floral relief and ornamentation on brick surface. At the time of protection it was literally found buried under rank vegetation. It had reached an advanced stage of decay and its proper conservation involved considerable funds and time. A phased programme, spreading over five years, was therefore, drawn up in 1964. An estimate amounting to Rs. 72,366/- was prepared and work started in 1965.

The estimate included items such as dressed brick work on all four sides, four corner turrets and sides of openings, repair to cracks with dressed and cut bricks in the interior, relaying loose bricks taken out from the dome, making a curved cornice with dressed and cut bricks, terraced roofing with lime, beaten terraced flooring inside the prayer chamber, clearance of debris and jungle growth from the site of the monument and a barbed wire fence erected.

All this has been completed within the allotted time and budget. The mosque now stands fully restored.

**RANBIJOYPUR MOSQUE**

This mosque is situated not far from Bibi Beguni’s Mosque, in the vicinity of Khan Jahan Ali’s Dargah. Although its hemispherical dome
was apparently intact, banyan and other trees had caused considerable damage to the structure. A big crack caused by the roots of these trees had loosened the masonry and it was therefore necessary to attend to it urgently. Similarly, there were other petty items which required immediate attention. Consequently, an estimate amounting to Rs. 60,663/- was framed to meet expenditure on the special repair of this mosque. The items included were general clearance of debris, dressed and plain brick work, lime terracing over the roof, filling of cracks where visible, repair to the decayed floor and providing a barbed wire fence. Most of these items have since been completed.

**Nine Domed Mosque**

This massive mosque is situated on the west bank of Khan Jahan Ali’s Dighi, near his tomb. This mosque also belongs to the Khan Jahan Ali group of monuments which are generally dated back to the 15th century A.D. It has recently been brought under statutory protection. At the time of so doing the mosque was in a most dilapidated condition and in order to arrest progressive decay it was necessary to give immediate attention to its conservation. With this view in mind, an estimate for Special Repair amounting to Rs. 11,550/- was prepared which included items such as the eradication of overgrown plants and shrubs, clearance of debris, repairing the outer wall and the three damaged arched openings etc.

Work was started during 1967-68 and successfully carried out. The entire surrounding area has been cleared of debris and the jungle growth existing along the enclosure wall. Face brick work and core filling works were also taken up on the outer face of this wall.

Owing to unavoidable circumstances, the special repair work on the monument could not be carried out during 1968-69 but it is proposed to continue this during 1969-70, for which work an estimate has already been prepared.

**Paharpur Monastery**

The extensive remains of the famous Sonapuri Vihara at Paharpur constitute one of the most imposing pre-Muslim monuments in East Pakistan. Owing to a lack of funds, adequate conservation measures could not be taken earlier, resulting in the deterioration of these remains. Especially numerous ancillary structures on all sides of the courtyard,
within the vast enclosure, in the shape of votive stupas, shrines, refectory, kitchen etc., urgently called for attention. Removal of salt affected brick work in the main temple, face brick work at various affected places, core-filling with lime surkhi mortar, and clearance of debris were the principal items which were included in an estimate for Special Repair, framed during 1967-68.

All these have since been completed. The work could not be continued during 1968-69 as it was observed that, in many cases, the existing structures in the refectory area do not quite tally with those shown in the plan of the Monastic Establishment prepared at the time of excavations. There exist some structures which are not indicated in the plan, which, at certain points, some structures indicated in the plan do not now exist. It was, therefore, decided that before any conservation work is undertaken, the half-buried structures should be cleaned properly to expose their correct layout and discrepancies noticed in the plan should be rectified by the draftsman. The Circle draftsman was deputed to take up the necessary work and at present he is preparing the revised plan.

**SATYAPIR BHITA**

This highly interesting 11th century Tara Temple, with numerous votive stupas of varying shapes and sizes, clustering around the main shrine, unfortunately suffered long neglect owing to a lack of funds and technical staff. About forty four votive stupas were attended to during 1964-68 and the overall condition of the monument was improved, but a lot of work remained to be done. Ten more such stupas have been restored and conserved during 1968-69.

**IDRAKPUR FORT**

Work on a portion of the fortification wall, towards the southern side, was carried out and completed within the allotted budget. Items of work included plastering the surface of the wall after removing the dead plaster adhering to the wall, patch brick work at places, repairs to the merlons, clearing away overgrown vegetation and cleaning a ten feet wide belt along the wall.

**HAJIGANJ FORT**

Items of work completed here during 1968-69 include filling of earth in low lying areas around the fortification wall, fencing the unfenced area with barbed wire and R.C.C. posts, as well as repair to the three missing merlons.
REPORT ON THE NATIONAL MUSEUM OF PAKISTAN FOR 1968-69*

(Plates XLIX—LI)

INTRODUCTION

The basic objectives of the National Museum of Pakistan are to collect, preserve, study and exhibit the records of the cultural history of the country. Cultural relics of a country are the virtual foundations for advancement in corporate life. As achievements acquired after a prolonged struggle with nature and environment, they manifest the store of creative intelligence, initiative, perseverance and integrity that have gone into the making of a particular national character. With this philosophy, the National Museum of Pakistan was opened in 1951, a time not particularly suitable for the birth of such an institution when the entire structure of national economy was only faintly inscribed on blue prints. The immediate problems of securing material for exhibition and suitable accommodation had, therefore, to be solved on a makeshift basis. The historical building of Frere Hall built in 1865, was taken on rent from the Karachi Municipal Corporation, and the National Museum continued to be located there until July, 1969.

The Government, realising the importance of this national institution, have since constructed a special building at Burns Garden, Karachi. It was only a few months ago that the building was completed in its essential details, including a boundary wall and some outer structures for a workshop, office, garages and stores. The reserves and exhibits from Frere Hall have also been shifted to the new building and are in the final stages of their re-arrangement.

The National Museum is located in the heart of Karachi and is easily approached from all parts of the city. The premises form a rough quadrangle, encircled by Ingle and Strachen Roads, Shahrah-i-Kamal Ataturk and Kutchery Road. The main entrance lies towards Shahrah-i-Kamal Ataturk, just beside the Sindh Muslim Law College. The special

* The material for this report was received from the Superintendent (Mr. S. A. A. Naqvi), National Museum of Pakistan, Karachi—[Ed.]
entrance for V.I.Ps. is located near the junction of the McLeod, Ingle and Kutchery Roads.

The new building stands in the middle of a spacious garden, surrounded by palm groves, tamarisk trees, shrubberies, green lawns with flower beds and girdled by serpentine hedges. The sylvan atmosphere and seclusion offer a welcome relief from the din and bustle of surging waves of traffic, creating a mood of languor, retrospection and receptivity, particularly suited to seeing and listening to the eloquent message of the past in the various galleries of the Museum.

RE-ORGANIZATION

The re-organization of the galleries is proceeding apace and informally the public has been allowed to visit. Finalization of all minor details will indeed take more time, and the Museum will then be formally inaugurated. Keeping in view the financial limitations of a developing country, the scope of the National Museum of Pakistan has to be restricted mainly to archaeology, history, ethnology and ancient fine arts. Pakistan is fortunate in inheriting a large number of sculptures, coins and minor antiquities of various historical periods both in East and West Pakistan. Relics of the Muslim period consist of ceramics, glassware, fabrics, metal ware, arms, specimens of calligraphy, manuscripts, paintings, etc. In both wings of Pakistan, especially in the border areas, there are still tribes with a primitive culture, and this fact encourages studies in ethnology. The National Museum of Pakistan has therefore arranged its display in five main galleries which are serially the Prehistoric and Proto-historic Gallery, Gandhara and Hindu Gallery, the Muslim Gallery, the Ethnological Gallery and the Manuscript Gallery. The Manuscript Gallery has a special arrangement for scholars to undertake studies and research, away from the disturbance of the normal visiting public. There is also a separate section given to studies in Numismatics.

The National Museum lays special stress on its Educational Service for students of schools, colleges and universities, as well as cultural programmes for the general public. A special auditorium, with a seating accommodation for about 100 persons and a stage, has been set up for this purpose. In normal circumstances, the auditorium will provide a number of entertaining, recreational and educative facilities to children under the guidance of an Educational Assistant who will also be res-
ponsible for organizing extension lectures and special programmes for select gatherings of scholars and people interested in the arts, literature, history, etc.

Besides the antiquities, ethnological objects and works of art on display, there have been built adequate reserves for each section, provided with reference cards and other paraphernalia to facilitate research work by scholars on request. A modelling laboratory prepares plaster casts of popular antiquities and also carries on the task of preservation and restoration of various objects.

The display scheme of the National Museum of Pakistan in its new building has been based on modern techniques and psycho-aesthetic principles of museology practised in the most sophisticated museums and art galleries of advanced countries. Some of the new features introduced in the display scheme are transparency cases with internal lighting to present photographic views in colour of selected monuments associated with various historical and cultural phases of the country. Each gallery, besides having on display sculptures and antiquities, will thus provide panoramic views for the study of the past, giving a sense and a feeling for the subject.

A special study in architecture, from the Chalcolithic era to the late Mughal period of Pakistan’s history, has been presented through mural paintings above the two corridors on the first floor. The paintings were done by Prof. V. Caroli, an Italian artist, at the request of the Government of Pakistan. The scenes represent a view of Mohenjodaro, the Buddhist stupa at Takht-i-Bahi, the Buddhist monastery at Paharpur, the Hindu temple at Kanantarag, the tomb of Rukn-i-Alam at Multan, the Sath Gumbad Mosque at Bagerhat, the Alamgiri Gate, Lahore and Bibi Pari’s tomb at Dacca. The monuments are representative of the various types of architectures dotting the country.

All the four main galleries, mentioned earlier, have been equipped with a play-back recording system to relay corporate knowledge of the various cultures in assimilable discourses of short periods. The exhibits will be amply labelled in three main languages viz., Urdu, Bengali and English. Arrangements are also in hand for preparing guide books to the various galleries and a general guide to the Museum.
In order to facilitate public circulation in the display areas of the Museum, special plans of the building are being prepared to be affixed to the walls at convenient places. In addition, large maps showing various historical events, and a relief map giving a bird's eye view of the adjoining countries of Pakistan with historical and cultural affinities, are being arranged.

The Gandhara and Hindu Galleries have been given a new look by introducing dioramic panels, imitating the architectural recesses of the Buddhist and Hindu monuments. The two galleries have been connected by a covered passage which has typical Buddhist and Hindu portal designs at the respective ends.

The Muslim Gallery displays a vast array of ceramics, pottery, glass and metal ware and scientific instruments. The diorama, depicting the siege of Debal, and a prince with his teacher poring over a book of cosmology, with an armillary globe resting beside them in a Mughal Garden do, so to say, enclose the entire history of Muslim ascendancy over the Indo-Pakistan sub-continent and its achievements.

The Ethnological Gallery has been provided with alcoves, dioramas and show-cases for the display of cultural objects and representative human models of the various tribal areas of Pakistan. The display has been made with a thematic scheme to bring out the chief characteristics of tribal life, its art, religion, physical and cultural background.

NEW ACQUISITIONS

The Advisory Council, National Museum of Pakistan, held four sessions during the year under review to consider the purchase of antiquities and works of art. The acquisitions made on the recommendation of the Council have considerably enriched the collections of the National Museum of Pakistan. Following, is the list of some of the important objects acquired:

Manuscripts.
2. An anonymous treatise in Arabic.
3. Thirty four specimens of nastaliq calligraphy.
4. Twenty folios of equal size, containing Quranic verses, prayers, etc., in naskh.
5. The Holy Quran in bold naskh.
6. One specimen of Khat-i-Tughra.
7. A file containing Marsiyas by Fasih.
11. Bahar-i-Danish.
17. Diwan of Nizam.
18. Diwan of Sail.
19. Diwan of Zafar.
20. An anonymous manuscript containing Aurad and Wazaif in Sindhi.
21. One bayaz containing Masnavi in Multani, said to be Saiful Namah.
22. Khamsah of Nizami.
23. Singhasan Battisi.
25. Madan al-Daqaiq.
27. Sharh al-Wiqayah, followed by an anonymous tract on jurisprudence.
29. Isaghoji.

Ethnological Material.

1. Ethnological material purchased from Swat, Buner and Dir, comprising 246 items of various description.
2. Ethnological material purchased from Multan, Bahawalpur and Baluchistan, consisting of 34 items of various description.

3. Ethnological material from the Chittagong Hill Tracts, comprising 83 items of various description.

Antiquities.

1. Ten silver coins of Muslim period.
2. Vishnu patta, in stone.
3. An unidentified miniature deity.
4. A miniature Siva lingam with Gauri patta, in stone.
5. Uma Mahesvara (Alingana Murti), in stone.
6. Sarasvati, in stone.
7. Chamunda, in stone.
10. Sapta Matrika Panel, in stone.
11. Wooden door, without jamb. The door is delicately carved with Hindu deities and mythological figures.
12. Part of a wooden door, with carving of an elephant and griffin.
13. Vishnu patta, in stone.
15. A male bust with negroid hair and aboriginal ethnic features, terracotta.
17. Six garments of the Mughal period, approximately 200 years old.

Museum Educational Service and Extra Curricular Activities.

1. Conducted tours were arranged for groups of students from educational institutions from the city of Karachi and other parts of the country. Batches of students from 300 schools, colleges and universities visited the Museum during the year.

2. Mr. S. A. Naqvi, T.I., Superintendent, National Museum of Pakistan addressed a meeting of the P.I.A., Regional Managers and gave a talk on the Importance of the archaeological heritage
and historical monuments in promoting the tourist trade in the country. He visited Paris as a representative of the Government of Pakistan at the meeting called by UNESCO to consider ways and means of saving Mohenjodaro from salinity and waterlogging. He attended another meeting convened by UNESCO at Tashkent and Samarkand at the invitation of the Soviet Government.

3. Facilities were provided to a Research Scholar of Persian literature from Tehran University in consulting some Persian manuscripts of the Mughal period. Dr. Abdullah Chagatai and Mr. Hanif of the Karachi University were also provided guidance and facilities in connection with research work on manuscripts. An American scholar from Michigan University was given all assistance in his research work on the Aligarh Movement. He consulted various manuscripts and documents in the reserves of the National Museum of Pakistan.

4. During the year under report, the following scholars were invited to deliver Extension Lectures on special topics.

a) Dr. Schetenco, a Russian archaeologist delivered an illuminating lecture on the Turkmenian Republic and drew comparison between the antiquities of that region and those of Harappa and other excavated sites of the Indus Valley Civilization.

b) Another lecture, by Prof. Casal, Director of the French Archaeological Mission in Pakistan, elucidated certain newly discovered facts about the excavations at Pirak in the Sibi District of the Quetta Division.

SPECIAL EXHIBITIONS

During the year 1968-69, antiquities and other display materials were sent to Australia for the Exhibition of Five Thousand Years of Pakistan. Another Exhibition on the life and activities of Mirza Ghalib was held in the Local Arts Council under the joint auspices of the National Museum of Pakistan and the Arts Council. An Exhibition on the Role of Museums in Education was arranged at Frere Hall on the occasion of the 19th All Pakistan Museums Conference held from 16th to 18th May, 1969.
RESEARCH WORK AND PUBLICATIONS

At present, re-organization and administrative problems require the whole time attention of the members of the staff. However, some of the works published by them, and others soon to be published, are mentioned below:

1. Mr. S. A. Naqvi, T.I., Superintendent, National Museum of Pakistan wrote an article *Picturesque Taxila*, for publication in the British Press on the occasion of the Commonwealth Prime Ministers’ Conference held at London. He contributed an article, *Archaeological Achievements of Pakistan in Perspective* and another, *Glimpses into the Past* was published in *Artistic Pakistan*. His article on the Museums of Pakistan, was published in the Departmental Journal, Pakistan Archaeology No. 5 this year.

2. Mr. Muhammad Ishtiaq Khan, Assistant Superintendent of Archaeology (Manuscripts) prepared a research article on the Tomb of Jam Nizamuddin at Thatta. He also contributed an article *The Bronze Statues of Gandhara Region* in the XXI edition of *Museum Journal*. He read an article on *Museum Management in U.S.A., U.K. and France* at the All-Pakistan Museums Conference held at Karachi in 1969.

3. Mr. S. M. Ashfaque, Assistant Superintendent of Archaeology (Ethnography) is carrying out research on the tribes of Kafiristan. The first results are being compiled in the form of an article for publication, which may later be expanded to a monograph. He has been assigned the task of preparing the guide-books to the Museum galleries. His research article on *Banbhore Mosque* is in the final stage of completion. Other articles by him were published in the English dailies of East Pakistan.

4. Mr. Ali Mohammad Khan Lundkhwar, Assistant Superintendent of Archaeology carried out research work on the Genealogy and tribal origin of the Pathans of the former N.W.F.P. and Afghanistan. He also prepared articles on Muslim pottery and Burial Rites in various cultures.

5. Mrs. Pervin Tufail Nasir, Assistant Superintendent (Numismatics) has prepared a book on the Ancient Coins of Pakistan. She read a paper *Coins of Sher Shah Suri* in the 19th All Pakistan Museums Conference. Her other articles, published in various
Journals in the English and Urdu languages are Evolution of Women's Costumes in Pakistan, Taxila and Role of Museums in Education. She has also prepared a comprehensive research paper on the Muslim Coins of Banbhore.

6. Mr. Afzal Ahmad wrote an article on Museums in Education.

7. Mr. Masud-ul-Hasan wrote an article on Sindhi Ornaments and read it at the 19th All Pakistan Museums Conference.

8. Mr. Abdus Sabur Miah wrote an article, The Tribes of Mymensingh, which was published in the Dawn, 27th July, 1969.

Distinguished Visitors.

1. Mr. Qahtan, Editor Al-Riyadh and Al-Yasna of Saudi Arabia.
5. Prof. G. Tucci, of ISMEO.
6. Dr. Faccenna of ISMEO.
7. Minister of Foreign Trade of the Republic of People's China, accompanied by the delegates of the Chinese Foreign Trade.
8. A delegation of Turkish Parliamentarians.
9. Dr. Amir Birjandi, Secretary, Ministry of Education, Iran.
11. Foreign News Editor of the Manchester Guardian.
12. A delegation of 40 members of the Smithsonian Institute.
ARABIC SCRIPT—ITS ORIGIN AND DEVELOPMENT

(Plates LII—LV)

by

Habibur Rahman

Writing, in one form or another, has been in use as a medium of communication almost with the beginning of human society, and probably before organised language developed. Still whatever may be its origin and antiquity, its dual role of expressing an art-form and of representing a system of symbols for communicating the spoken word has always been recognised. In form and style these symbols have changed beyond recognition from the earliest to the present times. Their present shapes are the result of changes and modifications which have naturally taken place as the system progressed through different stages of development such as hieroglyphic, cuneiform, pictographic, ideographic, syllabic and, finally, alphabetic. These changes are so profound that even if a small link in any individual line of development is lost, it is difficult to recognise a modern form as the development of an ancient, and vice versa.

It is also a matter of investigation whether the origin of all the alphabetic scripts was confined to one or whether there was more than one. What appears to be certain is that a considerable number of present-day scripts were derived from a single origin, but there are many other scripts whose origin is yet to be determined. As for the Arabic script, it originated long after the development of the alphabetic system and even after the development of the Arabic language itself and when this language had reached its zenith, the script was still in its infancy. If we are to believe Ibn Batuta, the Hizazi people learned this script from the people of Hirah, who themselves learnt it from the Tubbas and Himayara. The early form of Arabic writing has a close affinity with the Nabataean script and, as such, it is generally believed that sometime between the 4th and 5th centuries A.D., the former was derived from the latter, presumably at the Nabataean cities of Petra and Hijr (Madain Saleh).
At first, neither the Nabataean nor the Arabic scripts had any diacritical marks and vowel points, but with the passage of time both these features gradually made their appearance in Arabic writing. The script seems to have been influenced by the prevailing usage in the Syriac from which the practice of marks and points appears to have been adopted. This, however, should not in itself lead us to think that the Arabic alphabet was derived from the Syriac, as some scholars still maintain. There is little evidence to support such a view.

The Arabs had constant contact with the northern people of the peninsula, and it seems natural that they should have adopted some of the arts and crafts of the civilized north, including the art of writing. It is also presumed by some that Arabic writing was derived from a peculiarly angular, ‘Supported (Musnad)’ script borrowed from the southern kingdom of Yaman. The history of the tribe and kingdom of Kindah in the north reveals that these people had migrated long ago from Yaman and had settled in this part of northern Arabia to become permanent inhabitants. It is supposed that under their influence a script of Nabataean derivation originated in this locality.

The Nabataean kingdom of northern Arabia flourished between 69 B.C. to 106 A.D. and the Nabataean script is supposed to have been derived from the Aramaic during the last two centuries before the Christian era, when the Nabataean culture was at its zenith. It is from the Nabataean script again that a new style of writing called ‘Sinaitic’ developed in the 2nd century A.D. This new script is regarded as the connecting link between the Nabataean and Arabic scripts. The Nabataean script and language remained current for more than three centuries, after the fall of that kingdom in the second century A.D. These three centuries (2nd to 5th centuries A.D.) were actually a transit period when the Nabataean script is regarded as having been transformed into the Arabic.

The earliest known specimen of writing showing Arabic features is dated 250 A.D. It was found at Ummal-Jamil (Pl. LII.a). It bears a striking resemblance to the style of writing of Imrul Qais (Pl. LII.b) whose date, 328 A.D., is 78 years later than that of the inscription mentioned. This may be regarded as a reasonable period for the formation of a separate and distinct script. These writings provide some evidence of transformation from the Nabataean to Arabic styles. Further, the two earliest known
inscriptions in Arabic, one trilingual, with Greek and Syriac, and the other bilingual with Greek only, are dated 512 A.D. and 568 A.D. (Pl.LII.c) respectively. They bear a close affinity to the inscriptions found in abundance in the Sinai desert, particularly in respect of a tendency towards cursiveness (Pl.LII.d) but, of course, these latter inscriptions are in pure Nabataean characters. The last known Sinaic inscription of this type is dated 475 A.D. while the earliest known Arabic writing is datable to 328 A.D. (Imrul Qais). Both types are almost the same in character and style. This emphatically suggests that the character of the Sinaic inscription of 250 A.D., remained current in the area till 457 A.D., during which time its derivative, the Arabic script, began to take shape and developed ultimately as a separate branch of writing to serve the language which had already existed for centuries without a script of its own. Once born, the script shows a process of development and there is a clear difference between the scripts of the 1st and 5th centuries A.D. The later Nabataean script has many similarities with the earliest Arabic writing (4th century A.D.). Indeed, the 5th century Nabataean script is so much Arabicised that the conclusion is inescapable that Arabic writing was derived from the Nabataean script, presumably during the 4th-5th centuries A.D. Geographical and economic factors also support this view. The traders from both the Nabataean and Arabian lands carried on their business transactions, until 4th century A.D., either in the Nabataean or Arabic languages, but using, in both cases, only the Nabataean scripts (Arabic script not yet being developed), and thus it appears that, gradually the Nabataean style became the basic foundation of Arabic writing.

It is to be noted that although Arabic is one of the earliest Semitic languages, the Arabic characters are quite young among the scripts of this group. It is well recognised that Arabic is one of the richest languages in the world, but famous literary works such as Muallaqa, Hamsa, Kitabul Aghani etc., are the products of a period when the script had not yet emerged and was not used being neglected until the advent of Islam. Nowadays writing is a main vehicle of knowledge, but in those days the situation in Arabia was somewhat different. The pre-Islamic Arabic literature was not read from books, but spoken from memory. The Arabian people were very proud of their sharp memories and held writing in some contempt. The great literary figures, such as the authors of the
poems *Muallaqa, Hamsa*, etc., composed their works without writing and people memorised them. The writers were neither honoured nor considered literary figures and that, perhaps, explains why, with the advent of Islam, Mecca had only 17 persons who practised the art of writing. Thus, as a neglected and despised practice, this art developed a stiff angular style called Kufic, probably due to the hardness of the tool used for writing on such materials as stone, bone and wood. On rare occasions, the ‘Nashk’ or round form was also employed; it was the only alternative style of early Arabic writing. Thus, the pre-Muslim Arabic script may be considered as the initial form of Arabic writing and its slow progress is quite understandable in the light of the generally contemptuous feeling of the people towards this practice.

Islam changed the atmosphere greatly. It gave serious attention to writing and rewards were promised by the Prophet to the Katibs (scribes) of the Quran. The Quran itself points out the importance of writing thus: ورکک الاکرم الیؤم باللعب عالم الاسم سالم بعلم “and Thy Lord is most bountiful who taught the use of pen, taught man what he knew not”; and again: “By the pen and by the record which men write, and their record (writing) unfolds innumerable aspects to countless generations”. There are many such Quranic verses encouraging the practice of writing. The Prophet says that handwriting is one of the keys to men’s daily bread. He made it precondition for the release of prisoners of war taken at Badar, that freedom could be gained by teaching the art of writing to ten unlettered Muslims. This attitude had an obvious effect on the subsequent development of Arabic writing. It was recognised as a separate art and an independent profession as honourable and worthwhile as any other.

The writing of the Quran, Hadith and other books became not only an unavoidable necessity but a sacred duty of the followers of Islam. The Quran and Hadith were copied and recopied, to serve not only as religious books but also as a code of life needed by everybody in everyday affairs, religious, social or political.

Thus the art of writing received a new impetus under Islam. But there are other reasons which led to the rapid development of this art under Islam. Among them, the prohibition of representing life in any form in Islamic art is important. In the Hadith, the makers of such pictures
were condemned in this world and threatened with more severe punish-
ment hereafter. Thus the professional artists, after embracing Islam,
became jobless and Islam provided them with this alternative choice of
making writing an art instead. The available evidence indicates that
this was readily accepted and practised throughout the Muslim world.
It ultimately developed as a distinct and individual form of art, rapidly
growing and expanding in various branches and styles.

Political factors played an equally important part in the early deve-
lopment of writing. During the period of pre-Islamic anarchy, Arabia
was divided into small entities which can hardly be called states. They
did not keep records and needed no scribes. Islam brought about a
great change with the establishment of a big empire with permanent settlers
and urbanized societies. The little kingdom of the Prophet expanded
beyond the borders of Arabia even during his life time, and after his
death, the empires of Rome and Persia fell like autumn leaves and the
borders of Arabian conquest stretched from continent to continent.
For better administration this huge empire had to be divided into pro-
vinces, divisions, subdivisions and so on, and these divisions needed
governors, qazies, generals etc., with whom regular correspondences
had to be maintained by the central administration and vice versa. In
those days, writing was the only source of communication and as Arabic
was the state language, all correspondence, whether political or non-
political, was written in Arabic. In this, the individual writer showed a
natural tendency to beautify his own hand, so that it might compare
favourably with that of others, and thus something new might be added
to the original form. The government had in its employ a regular class
of Katibs (writers) who were responsible for the official correspondence
and their contribution to the development of this art, in making it a
respectable profession and a worthy subject of contemporary fashion,
was great. The ornamental style of writing or calligraphy gradually
occupied a most important position in the art of the Islamic world and
in India, calligraphy was considered to be one of the principal qualifica-
tions that a Muslim prince ought to acquire. Consequently, most of the
Mughal rulers were well-known for their beautiful writing.

The earliest style of Arabic writing was angular; this form later
came to be known as Kufic, after the name of Kufa where it was widely
practised and developed as an art. It included all writings of angular
a. Early writing (250 A.D.) showing Arabic features

b. Bilingual writing of Imrul Qais, 328 A.D.

c. Arabic Script dated 568 A.D.

d. Arabic writing, about 6th century A.D.

b. Plain Kufic of earlier date
a. Arabic letters with figural representations

b. Foliated Kufic
c. Shikasta style
a. Tughra style, ‘A marching army with lances held above the head’?

b. Another specimen of Tughra, ‘Boats and oars of riverine East Pakistan’?

c. A specimen of Ghubar writing
Margala Pass, District Rawalpindi. Persian inscription of the Mughal period
Swat. Windows and door of carved wood
a. Swat. Ornaments

b. Swat. Ornaments and toilet objects
a. Impregnator for documents

b. Vacuum fumigation chamber
type written or inscribed on any material. This style of writing is divided into four types viz., Meccan, Medinan, Kufic and Basran. There is no fundamental difference between the Basran and Kufic varieties while the Meccan and Medinan are also quite similar. Hence, we may distinguish only two broad types, the Meccan and Kufic. The difference between the two is traceable in the following: in Meccan *alif* bends to the right at the lower end, the extended vertical strokes of *alif*, *lam*, *lam-alif*, *za*, *kaf* of this variety are high and the script has a moderate downward slant to the left. The Kufic variety has characters which are heavy, thick, frequently short, comparatively angular and more or less square in form. Here, in this variety, *alif* always bends to the right. Thus, the Meccan *alif* has a long, slanting stroke while in the Kufic variety it is short and vertical.

With the beginning of Ali’s Khilafat, Kufa gained an independent status and its scribes got their due share of honour and benefits. The Kufic script prospered as it had never done before. Ultimately, its use was so popular and widespread that it obliterated the Meccan style almost completely and both Muslims and non-Muslims designated all varieties of the early angular script ‘Kufic’. Thenceforward it received much attention from scribes and artists for centuries. But the stiff angular shape of the Kufic style obstructed its rapid use for ordinary, everyday purposes and gradually it was reserved for copying the Quran and for inscriptions on stone and coins up to the 7th century A.H. For ordinary use, the ‘Naskh’ or a curved style of writing, which is easier and more swift in practice, gradually gained popularity and reached its zenith in the 6th century A.H.

The Kufic style remained in use for about six centuries but as the scribes always tried to add something to the style and ornamentation of the script, Kufic characters took different shapes and forms in different ages. As a result, seven more varieties developed from the original (Kufic) form; (1) the earliest characters are stiff and angular without any decoration and ornamentation (Pl. LIII.b). Later varieties which developed from it are: (2) Kufic with elaborate apices *i.e.*, with elaborate summits or vertical points; (3) Foliated Kufic in which the characters are designed as leaves of plants. It is characterised by the decoration of apices or summits of letters in the shape of half-palmette, two or three lobed leaves, or bifurcated letter ends. The earliest record in this script
was written in 243 A.H./857 A.D. (Pl. LIV.b); (4) Floriated Kufic showing the same decoration but with the addition of floral motifs, tendrils and scrolls growing from the termination or medials of letters. These tendrils are to be distinguished from those belonging to a floral background and form, in contradistinction, an organic unit of the letters from which they grow. The first known specimen of this style dated 341 A.H./952 A.D. was found in Tunisia. Another specimen from Persia is dated 348/959 A.D. (Pl. LIII.a); (5) Bordered Kufic; (6) Architectural Kufic with letters taking the form of architectural features; (7) Rectangular Kufic with letters of rectangular shape and (8) Interlaced Kufic with letters forming part of other letters, such as in the word \( \pi \upsilon \) where \( \upsilon \) has been used for both \( \pi \) and \( \upsilon \) and so on.

There are some other varieties in the Kufic style such as those with letters forming the shape of human figures (Pl. LIV.a) and animals, etc. It may be stated again that though this early script is named after the famous Arab city, the style was in existence before the foundation of Kufa or even before Islam.

With the expansion of Islam, the use of writing extended much beyond the confines of religion; it covered many walks of life, specially political and administrative. The Kufic style progressed slowly because of its stiff angular shape. To cope with this unsatisfactory situation, a cursive style called ‘Naskh’, which is both swifter and easier to practise, was developed. Actually, this style is as old as Kufic, but it was not much in use earlier. Until the middle of the 1st century A.H. when the necessity of writing increased greatly and writing material, such as papyrus was abundantly available, Kufic remained in extensive use; but its form and style were not adequate. The scribes therefore were compelled to adopt a swifter, cursive style of writing which, as we have noticed, was already there. The discovery of a manuscript dated 22 A.H. written in this cursive style explodes the theory that Ibn Muqlla in 310/922, under the patronage of the Abbasid Caliph Muqtadir Billah, invented this style along with the other five, viz., Thuluth, Tauqi, Muhaqqaq, Raihan and Riqa. Much before his birth, Kufic was classified into two varieties viz., ‘Kufic angular’, and ‘Kufic round’. There are early copies of the Quran which show specimens of both the round and the angular styles. The round variety is called Kufic-Naskhi, which indicates its transitional stage from Kufic to Naskh. It may be correct that Ibn Muqlla
gave it a distinct and separate form and it may be due to this fact that he is associated with the invention of the six styles. Ibn Bawwab (died 416/1025) wrote well in all these styles, and Yaqut (died 697/1292) brought them to perfection. Though the origin of the cursive writing is as old that of Kufic, the cursive style was too poor and insignificant to be regarded as a separate style of writing. However, due to its ease in writing it has been widely accepted, while the Kufic, due to its unsuitability for ordinary use, gradually diminished in popularity until the 7th/13th century when it was entirely replaced by the former. It is true that the Naskh had not been widely practised until the time of Ibn Muqla (310/922), who popularised it so much so that people credited him for its invention. This of course is not true. But Ibn Muqla derived the other five forms out of it, and must be credited for their early development.

In this connection, mention may be made of the general tendency of the scribes and artists to beautify their writing by ornamenting the letters according to their individual taste, and this explains why we find marked differences in a single style as practised by different scribes. It was noticed earlier, for instance, in the Ain-i-Akbari, which points out that ‘the beauty of a letter and its proportions depend much on personal taste’. Hence, it may not be incorrect to say that every scribe had a style of his own. Variations occurred only in ornamentation and decoration, and different terms were used to distinguish them. For example, if one-third of the line is curved and two thirds are straight, and the letters are jali the variety is called Thuluth. But if the letters are khafi, it is called Naskh. If the letters are written with a penful of ink and are quite thick, the style is called Khafi. The opposite is called Jali. If three-fourths of a line are curved and one-fourth is straight and the letters are Jali, it is called Tauqi. But if the letters are Khafi, it is called Riga. In case one-fourth is curved and three fourths are straight and the letters are Jali, it is called Muhaqqaq, whereas if the letters are Khafi, it is called Raihan.

Sometimes the letters of Naskh style are so interwoven as to assume a decorative design. This is called Tughra. It is so different in shape and arrangement from all others that it is undoubtedly a distinct and individual style of writing. Its special feature is that the design resembles a variety of objects or motifs—in fact anything that one could imagine. In this style, the vertical strokes of alif, Lam, etc., reach the upper border of the
panel, far above the horizontal line, the heads slant towards left or right, and *num, yas*, etc., are so curved above the line as to resemble a bow and arrow or, as imagined by some, a marching army with guns or lances held menacingly above the head (Pl. LV.a) or even a mourning funeral party. The design is generally compared with a victorious army, unless of course, it is found on a grave, where a funeral party is more appropriate description. Again, when the inscription is found in riverine East Pakistan, the design may aptly be compared with boats and oars which form part of a very familiar scene. (Pl. LV.b). The *Tughra* of East Pakistan has a special beauty of its own which is not generally met with elsewhere. In the words of Ghulam Yazdani, “The script of Bengal . . . has been characterised from the beginning by delicacy of form and subtlety of arrangement”.

*Ghubar* is also a variation of *Naskh*. It represents a style with very minute letters which serve as a background of an inscription with large letters (Pl. LV.c). Sometimes it is written in such a way that its composition forms the outline of birds and animals such as lion, elephant etc. Ibn Muqla is credited with the invention of this style also (*Ain-i-Akbari*, p. 99).

Another style of writing called *Gulzar* is not written in the usual manner. In it, the inscription is first drawn in outline and then the space is filled up with decorations. This is actually an ornamental treatment of other styles.

While discussing the style of Arabic writing, a significant fact, closely linked with its later development, may be mentioned. The Arabs appeared in history as conquerors, and they came to the conquered territories as a proud and superior people with their own art and culture, but in some of these territories the ruled was culturally superior to the ruler. Indeed, in many instances, the Arabs were greatly influenced by their subject peoples, particularly the Persians. The art and culture of the Persians were superior to and more effective than those of the Arabs, and it is hardly surprising that within a century of the conquest, the Persian culture dominated the world of Islam. This is emphatically attested to by the continuation of the old Persian-style representations of life in the art of Islam in spite of a strong religious prohibition. Evidently, pre-Islamic practices were not totally wiped out and figural
representation on various religious monuments and objects such as tombs, mosques, books etc., are abundantly present in the Islamic art of later days. The Arabic writing, like graphic arts, was also greatly influenced by the old tradition of Persian art and writing. As a result of this early contact and the inevitable intermingling of styles, a new style evolved which is called Taliq. Due to various reasons, it did not last long. But in about the 14th century A.D., an admixture of Naskh and Taliq produced a new style called Nastaliq, which was found more suitable to the requirements of the time. It is more cursive than Naskh and is characterised by a tendency to slope from right to left, the final form of letters being drawn out in a long cursive line which ends in a flourish. This style became highly popular because of its great facility for swift writing and for its beauty. The invention of this style is generally attributed to Mir Ali Tabzzi, a contemporary of Taimur, who flourished in the 2nd half of the 14th century A.D. This attribution must remain suspect, because there are manuscripts known to have been written in this style long before the time of Tabrizi. The artistic aspirations of later scribes added elaboration and ornamentation to the style. Later on, people began to write it without dots and with much ligature. Due to these additions or omissions it became somewhat difficult to read and in this later form, the style is called Shikasta (Pl. LIV.c). During the time of Shah Jahan, Mirza Muhammad Hussain introduced it to India. This is probably the reason why he is regarded by some to be the inventor of this style, but known manuscripts in this style date from as far back as 868/1464.

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A PERSIAN INSCRIPTION OF THE MUGHUL PERIOD
AT MARGALA PASS NEAR RAWALPINDI

(Plates LVI—LVII)

By

Ahmad Nabi Khan

The continued hostilities and frequent inroads by the Afghans at north-western frontiers of the Mughul empire was a matter of concern to the Mughul Emperors throughout the period of their long rule in the sub-continent. During the days of Emperor Aurangzeb, however, it seems that the situation had become more serious. In 1083 A.H./1672 A.D., after the disastrous defeat of the Mughul army under the command of Muhammad Amin Khan, then Viceroy of Afghanistan, Aurangzeb recalled Mahabat Khan from the Deccan and appointed him the governor of Kabul.1 Mahabat Khan had previously governed Afghanistan on three occasions and therefore had a good knowledge of local affairs. According to the orders of the Emperor, Mahabat Khan proceeded to Kabul thereafter. On his way to Kabul, he travelled through the Margala Pass and found that the road area was in disrepair. He gave orders for its immediate repair which was accordingly done.

This event has been recorded in a Persian inscription fixed on a sidecutting at the Margala Pass (Plate LVI). The inscription has been carved in very elegant nasta'liq script, typically Mughul, in high relief, on a slab of black slate, measuring 1'-4" × 2'-9½" (Plate LVII) and bears 8 lines of Persian verse (4 couplets, the second hemistich of the last one being a chronogram giving the date of the repair), and 4 lines of Persian prose which record the names of the persons who either supervised or carried out the work.2

2 The endorsement seems to be a later addition. See discussion infra.
The text of the inscription has been deciphered and edited by as many as five scholars during the course of the last one hundred years. The present is the sixth attempt which tries to give not only a more complete and, therefore, correct reading of the inscription but also analyses the decipherments of the earlier scholars and their hypotheses on the historical events connected with this inscription.

The earliest attempt to read the inscription was made in 1871 by Mr. Delmerick who could record only four lines (two verses) and an incomplete part of the prose (endorsement) below the verses:

هولاقدار
خان قوي بنجه مباحت شكوه
شير زمر بنجه. او ناثوان
گفت مخل رومي تاريخ شان
ناسيه، سموش هندوستان
سته 1081 هجري
باهمام ميرزا محمد داروغه و احمد سما مصارف و جوگيداس و ديبي داس تحويلدار.

Translation
The Khan of strong hand, and of exalted dignity, the lion is powerless to overcome his strong hand.

Mughul Rumi composed the chronogram ‘naciah-i-mahwash-i-Hindustan’, the moon-like forelock of Hindustan, A.H. 1083 (or 1672 A.D.).

2. The second attempt was made in 1874 by Mr. E. Rehatsek who records:

Heolaqadar
خان قوي بنجه مباحت شكوه
شير زمر بنجه. او ناثوان
در كخل بارگله آنهکه یود
باکریچرخ برين تو آنان
ساخت جنان وا روي شرى
پايبه دید جرخ زدر زان
گفت مخل از پي تاربخ سال
ناسيه، سموش شده دانان
احمد سما مصارف و جوگيداس و شرق و دباداد تحويلدار. سته 1081 مروت شد، 4496.

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Translation

He is the Almighty!

The strong-fisted Khan of great power,
Under whose grasp a lion is helpless,
Has, on the Ketel of Margalah, which is
A twin with the ball of uppermost sphere,
Made a paradise of noble aspect,
And daily be-held the rotation of the times.
He uttered a parable to fix the date of the year:—
"The Moonlike forehead became the general talk."

During the time of Mirza Mohammad Daru and Dastan Ahmed the architect, and Sherf and Dialdas Tehnvidar. Repaired in the year 1081 (A.D. 1767).¹

3. The third and a little more accurate but again incomplete reading was made in 1933 by Dr. Yazdani who records:—

Translation

He is the Almighty!

Verse

(1) The Khan with powerful grip and majestic appearance (who is so powerful) that the tiger feels himself feeble in his grip.

(2) In the hillock of Margala which on account of its height is united with the zone of heaven.

(3) He built such a lofty pass that......heaven......on earth.

(4) Mughal has composed the chronogram: the forehead of the belle (lit. the moon-faced lady) of India.

Under the superintendence of Mirza Muhammad.......darogha .......Ahmad, the Architect, Jogidas, the Accountant, and Diyal Das, the Cash-Keeper, was completed in 1083 H. (1672 A.D.).

4. The most recent attempt is that of Col. K. A. Rashid who published his readings alongwith those of others in 1956. The following is the reading:

خان قوی بنجه سابت شکوه
شیر زسر بنجه، او ناتوان
در گر خل مارکل آنکه بود
با کره چرخ ی به تر امان
ساخت بنجه راه بر بروی گتک
که سر برد چرخ بر چند زمان
گفت معل در بی تاریخ سال
نامیه ماه وش پندوستان

(the letters have been effaced)

با اعتماد مولانا محمد میان و داروگه شیخ (عبدالعزیز) (ویور استاد) احمد معمار و جوادیاس و دیالداس

1 Yazdani, Dr. G., Persian Inscription at Margala in Rawalpindi District, in E.I.M. 1934, pp. 21-22, Plate X(a).

5. The imperfect reading of Col. K. A. Rashid has been copied by Dr. M. 'Abdullah Chaghatai with certain additions which he was able to make with the help of Prof. Vazir-ul-Hasan 'Abedi. The following is the transcription of Dr. Chaghatai’s reading:

6. The following is the reading of the text made out by the present writer:

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1 Chaghata'i, M., 'Abdullah, Ahmad Me'mar Lahori, (Urdu), Lahore, 1957, pp. 22-23.
2 Ibid., p. 23 fn.
3 The word has been chipped off from here, leaving only three dots below, a part of and the lower half circle. A close examination of the flow of this part of the circle shows that it can be only of and not of as the tendency of the flow is towards the left and not towards the right. This means that the missing half portion can be of the 'family' of the former and not that of later. The other point to be considered here is the presence of the three dots below which may be only of under the present circumstance. It is due to these consideration that the proposed word is suggested. Here, the only objection to the proposed reading maybe that the construction of the name as such is rather rare in Mughul set up.
Translation

He is the Almighty

(1) The august Khan with powerful grip in whose claws (even) the
tiger (feels himself) feeble and weak.

(2) In the high hills of Margala which on account of their height
are close to the celestial globe.

(3) (The Khan) built (here) such a lofty highway the heaven kisses
it continuously.

(4) The (poet) Mughul composed the (following) line to find out the
date of the construction (of the highway): the forehead of the
moon-faced (sweet heart) of Hindustan.

Under the superintendence of Mirza Muhammad Chiragh(?),
derogha, Ustad Ahmad Me'mar, Mir Mushrif and Diyal Das
Tehvildar (this passage) was repaired in 108 [3].

The abjad calculation of the hemistich "ناصیحہ سبسوی هندوستان" comes
to 1083 A.H./1672 A.D., though the last line of the inscription gives only
108 ( ) the first digit mutilated.¹

COMMENTS ON THE READINGS OF THE TEXT

A critical analysis of the various previous readings and a compariso
of these with the present one reveals that apart from the incomplete
reading of the text by these scholars, there are a number of textual
inaccuracies and assumptions with respect to the historical events men
tioned in or related to the inscription. These assumptions, it may be
added, have no foundation either from contemporary or later sources.
It will be useful to study and analyse these inaccuracies here. The first
reading recorded by Delmerick and edited by Blockmann, besides being
incomplete, has the following inaccuracies:

The title of the inscription as recorded by all the later scholars bears
one of the ninety-nine attributes of Allah. رؤی (al-Qadir) but, Delmerick,
reads it "مارگلہ" (Margala) instead of هوالقادر (Rmui)
for for and for سال نی "1083 هجری (year
1083 A.H.) below the last line, as read by him. In the endorsement, too,

¹ I am grateful to my teacher Professor Vazir ul-Hasan 'Abedi of the Persian Department in the
Panjab University, who helped me in solving a few points in the text of the inscription.
he omits جاغ (Chiragh) and reads اساد while it has been mentioned before the name of architect. He also omits altogether سيرمثر and reads دیال داس (Diyal Das). Similarly, he was unable to read the last words of the third line and the fourth line, "بیرون شد". Likewise, the reading of Mr. Rehatsek has several inaccuracies. Although he has tried to record all the lines of the text and something more of the endorsement, nevertheless commits mistakes and therefore, translates the text wrongly. For instance he reads in the fifth line جان (paradise) in place of جان (like, similar), راهروی (a lofty highway). The sixth line he deciphers بوسه دید جبخن زمان thus translating it incorrectly 'parable' while the correct word is the nom de plume of the poet who composed the lines and chronogram. The most fantastic reading however is that of the chronogram which has been translated thus: "The moonlike forehead became the general talk". When he worked out the date from the line according to the abjad system, he found himself unable to get the correct figure equal to the date. The editor then put a foot note; "On calculating this line, which purports to give the date, the whole of it will be found to be the number 1331, which is of course too much; the two first words together give 507; the three first words together give 815; and the fourth, i.e., the last word above gives 515". 1

The reading of Dr. Yazdani though much improved, is incomplete at places. As he himself admits, he could not see the original inscription and his text was based on the stampages provided to him by the then Archaeological Survey of India. 2

The reading of Col. Rashid is also incomplete as well as inaccurate at several places. He inserts many new words and phrases in the endorsement to prove certain hypotheses for which no proper justification is available. He records the first four lines (two completes) correctly, but the fifth line is incorrect as it reads راهروی (a lofty highway). Moreover, for the very clearly carved, but slightly mutilated line بوسه دید جبخن زمان he reads For very legible線 so as to add one numeral to prove his hypothesis that the road was repaired in 1084 A.H. (1674 A.D.) and not in 1083 A.H. 1 Indian Antiquary, op. cit., p. 205 fn. 2 E.I.M. op.cit., p. 22.
because Aurangzeb passed from here in 1084 A.H. In the endorsement, the following variations are noteworthy:

Also he omits the words میر شرک فی دیال داس while Col. Rashid leaves an unnecessary blank.

COMMENTS ON THE HISTORICAL EVENTS

This is a brief account of the inaccuracies which have been noticed in the previous readings, but before we pass on to the other problems of the inscription, it is worth while commenting briefly on some of the hypotheses made out by these scholars while dealing with the text of the inscriptions and solving the related problems.

Mr. Delmerick says: "the Margala Pass was constructed about the time when Aurangzeb marched to Hasan Abdal and sent on his son to chastise the Trans-Indus tribes." He does not quote any contemporary or later authority to substantiate his statement. However, the fact is that the Margala Pass did exist long before the expedition of Aurangzeb. In addition to the archaeological evidence, which proves that the area witnessed social and political activities since the very beginning of history, there are references in the written records to its existence as an important place. Alberuni, for instance, gives a description of Margala and its inhabitants, while dealing with the traditions and traits of the ancient peoples living in the various parts of Hindustan. During the later period, we find it mentioned by a number of other historians.

The next two scholars, Mr. E. Rehatsiek and Dr. Yazdani, do not discuss the historical events connected with the inscription, or with

1 Delmerick, op. cit., p. 259.
2 Sachau, Dr. Edward G., Alberuni's India, London 1910, Vol. I, p. 302, where he reads it Marikala; and Vol. II, p. 8, where he reads it Marigala. The semi-polygonal type of masonry and the typical stone flooring of the Pass indicate its origin to the period of the Greco-Romans whose influence was predominant in this part of the sub-continent during that period (plate IV and V). The point, however, needs further study. The subject has also been dealt with by Mr. Mohammad Wali Ullah Khan, in his report: Federal Capital, its Cultural Evolution, Architectural and Historical aspects, (un-published).

I am grateful to Mr. Wali Ullah Khan for drawing my attention towards this point.

3 Chaghatai, Dr. 'Abdullah, op. cit., p. 18. sqq.
the personalities mentioned in it, except that Dr. Yazdani records: ‘Ustad Ahmad was an architect at Shah Jahan’s court, and his name, along-with that of his son Lutfullah, who was an engineer, is carved on Hoshang’s tomb at Mandu.’ However, this celebrated architect had already died in 1059 A.H./1649 A.D. This Ustad Ahmad who has been mentioned in the inscription, therefore, seems to be some other person.

The article of Col. Rashid, besides summing up the efforts of the previous scholars and giving the transcripts of the text, contains several hypotheses which are according to him, mainly based on Ma’asir-i-Alamgiri. He stated that according to the Ma’asir-i-Alamgiri, “Aurangzeb reached Hassan (sic) Abdal on the 2nd of Rabi ul-Awwal in the year 1084 A.H.” It is not known from where he has obtained this information, because the same source clearly records that the Emperor started his journey for Hasan Abdal on the 11th Muharram 1085 A.H./21 April, 1674 A.D. and reached there on the 2nd Rabi al-Akhir 1085 A.H./6th July, 1674 A.D. Thus the theory is based on this supposition that as the year of the Emperor’s arrival was 1084 A.H./1673 A.D., therefore the date given in the inscription should be 1084 A.H. and not 1083 A.H. which he tried to arrive at by reading یام ودش for very clearly carved یام ودش in the chronogram. He also reads several words in the endorsement on his own and tries to prove that it was Lutfullah, son of the celebrated Ustad Ahmad who carried out the repairs. This fact is not discernible from the text of the inscription.

Further, he states on the authority of Ma’asir-i-Alamgiri: “We also find Mahabat Khan joining the Emperor on the 27th Rajab of the same year.” The actual date recorded by Musta’id Khan, for the arrival of Mahabat Khan in the royal camp is the 27th Rajab 1084 A.H. Col. Rashid’s contention that Mahabat Khan joined the Emperor also needs

1 Yazdani, Dr. op. cit., p. 22, fn.
4 See p. 7. supra.
5 Rashid, Lieut. Col. K.A. op. cit., p.49.
6 Ibid.
verification as it implies that Mahabat Khan participated in the expedition, while the fact is that he presented himself to the Emperor and was then ordered to leave to suppress the revolt of Bir Singh, grandson of Tihaldas. The text reads:  

نیبهر: نپلداس کور رخصت شد...  

The next statement of Col. Rashid, again based on the same authority, is: “In the Emperor's camp also appear, in the same year and almost simultaneously, Tehl Das, Darogha Shaikh Abdul Aziz and Lutfullah.” Here two points need consideration. Musta'jid Khan records the details of an event connected with the services of Shaikh 'Abdul Aziz, darogha of 'Arz-i-Mukarrar in the Royal Court who has been allowed to leave for Lahore. Obviously, he has nothing to do with the inscription under discussion, nor does his name appear on it. As regards the other name, Lutfullah Khan, Musta'jid Khan writes:

حکم شد لطف الله خان به نبایت اور مردم را از نظر بگذارند...  

Sarkar translates it thus: “It was ordered that Lutfullah Khan as his deputy should present the officers to the Emperor.” Here, 'his' ( ) has been used for Shaikh 'Abd al-'Aziz. This Lutfullah Khan, however, is not Lutfullah Muhandis, second son of Ustad Ahmad, but the son of Sa’dullah Khan, Wazir of Emperor Shah Jahan, who was a courtier of higher rank during the reign of Aurangzeb.

The most debated name in the endorsement of the inscription, however, is that of Ustad Ahmad. Col. Rashid has very rightly realized that Ustad Ahmad Lahori, the famous architect of Shah Jahan's period, was not alive at the time when the renovation to the highway was carried out. He has, therefore, tried to insert the word (Pur: son) before Ustad Ahmad in the endorsement to prove that it was his son Lutfullah who executed the work. He asserts that this Lutfullah was present in

1 Musta'jid Khan, Muhammad Saqi, op. cit., p. 137.
3 Musta'jid Khan, Muhammad Saqi, op. cit. p. 137.
the royal court at Hasanabadal. But, two points are to be considered here before we accept or reject his thesis. First, the renovation was carried out at least two years before the arrival of the Emperor at Hasanabadal. The question of the Emperor’s order to Lutfullah to undertake the job does not therefore arise. Secondly the inscription is too clear at this particular point to allow insertion of any word such as ‘pur’.

Under these circumstances, it is more probable that this Ustad Ahmad is some other architect who participated in the renovation of this important highway, of which a portion is left now to remind us its bygone glory.

Another baffling problem about the text of this inscription is the effaced line below the chronogram. The chiselling of the carved words is so wholesome and complete that except the traces of a few unintelligible letters, nothing is left. These letters are ﯾ٣...٣...٣...٣...٣...٣...٣...

It is interesting to note that the carving of the letters of the endorsement is not as finished and elegant as that of the verses. The lines of endorsement, it appears, have been added hastily later after effacing the line above it. It appears that originally it was not planned to have the endorsement at all. Later on, however, the people responsible for the execution of the work, wished to perpetuate their names by carving them at the end of the main text and the scribe complied with their wishes but for some reasons unknown to us, did not try to be as precise and perfect as he had been while carving the letters of the main text above. It is probable that the scribe started carving the endorsement just below the chronogram, but realizing that it would have no visual discrimination from the main text, he chiselled off the already carved line and left that space blank as it was not possible to carve the letters in relief there. Then he executed the endorsement after leaving sufficient margin on both sides. The other explanation may be that there was carved the date thus:

٣١٨٦ هجري

The line and the date has been effaced. But this possibility seems to be rather remote.

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2 This has been read by Mr. Delmerick and Dr. Yazdani, though without any evidence, as no traces of it exist in the inscription.
THE ETHNOLOGICAL WEALTH IN SWAT

(Plates LVIII—LXI)

By

Inayat-ur-Rahman

The people of Swat have made rich contribution in the building of art, culture and civilization. It has been my great privilege to study the historical background of this ancient land and study its impact on the life of the people. The more I study the more my interest, curiosity and wonder grow. I find that Swat has in the past commanded an important geographical position. It lay on the crossroad of Central Asia and was one of the main highways that connected China in the East and Imperial Rome in the West.

We have reasons to believe that Swat was agriculturally a very rich region and many Central Asian tribes used to come here in waves, one after another, in search of pastures for their cattle and livestock. Central Asia, and even the Gobi Desert were once rich pastures, but as the various tribes overgrazed them, they were compelled to go out in search of other lands and what richer lands than Swat could they find. In fact all down the centuries invaders have come to this land—invaders like Aryans, Persians, Greeks, Scytho-Parthians, Kushans, Afghans and Mughals etc., who brought with them their art and customs, their gods and goddesses, their weapons and musical instruments. These invaders came to conquer but they in turn were conquered, for they intermarried with the local Swati women which resulted in a mingling of blood and culture; of ideas and tradition; of philosophy and religion. They gave as well as borrowed, for civilization is just a question of willing exchange.

Swat was actually a land where rich ideas in art and culture evolved. The artist not only produced great works of art within the territory of Swat but went to other lands introducing his art and culture there. Swati artists also went as far East as China and helped decorating many
famous monasteries there such as the one at Loyang. Other went to Tashkand, Samarkand, Khokand and Bukhara. Some of the artists returned from these lands had brought back rich and fresh ideas. Thus the art and craft of Swat are a blending of many ideas from many lands that have had their impact on her culture and ethnological wealth.

I shall make my point clear by taking one simple example, that of Gandhara sculptures found in Swat. If we look at some of these works on stone carefully, we are convinced that the local artists who produced these remarkable pieces of art must have been influenced by the Persians, Greeks, Romans and Hindus etc. And so the ethnological wealth in Swat, whether in clay, wood or metal also bears a blending of such ideas.

I shall now take up some of the important ethnological objects I have personally studied and shall try to show the impact of such influence upon them. For instance the Layghaz which is an interesting candle stand used by the people of Dard Tribes in Swat Kohistan, and is called wore-balaunkay or orebalawat among the Pukhtuns of Swat and Layghaz among the Kohistanis. It is made of local clay and coated with a shiny material called kakswan having many shapes and designs, some with square tops, others with round ones bearing leaf and geometrical patterns.

I have tried to trace out their origin and although I cannot claim to have reached any definite conclusion, nevertheless, certain sources have thrown some interesting light on their background. For example I have been successful in collecting certain local legends which give me reasons to believe that this candle stand might have been introduced by the ancient Persians. These old legends in which we find references to the candle stands, have come down the centuries and are still related by some of the old illiterate Kohistanis with whom I have had the privilege of exchanging ideas about the origin of this object. Could be that these candle stands originally had something to do with the religious ceremonies of such Persian Tribes as the Sassanians and others who invaded Swat. We frequently find, among the Dardic people in Swat, such Persian names as Jamshed, Nowroze, Behroze etc. Also such customs as burning of incense for the purpose of warding off the harmful effects of the evil eye. So the Persian impact is, after all, evident on the life of Dard tribes living in a remote corner of Swat.

We have sufficient reasons to believe that this tribe, in some period
of its history, may have been fire worshippers. Here again the only guide are the old legends among the Dard tribes that refer to such Persian practices and beliefs as the ‘fire god and fire worship’. Surely there must be some truth in these legends which often reflect the culture and traditions of a people. And if it can be established that fire worship played an important role in the life of the Dardic people, then the role of this candle stand in their religious life can well be imagined.

Later on down the centuries, however, the candle stand may have lost its religious significance and the Dard tribes may have found them more useful for lighting their homes.

Whatever the origin of the candle stand may be, today, besides lighting homes of the Kohistani people, it is also used to decorate the drawing rooms of the most aristocratic families. Its charm, however, lies in its mysterious background.

Another subject of considerable ethnological interest is the wood carving work in Swat. These carvings are found on wooden furniture, doors, windows, beams and pillars of houses and old mosques. In these wood carvings we find interesting designs like beads and reels or saw-tooth ornamentation and stepped pyramidal motifs. In the doors and windows especially in their jambs we also find rope pattern borders and railings with bands of acanthus leaves.

I have also seen wooden structures representing the horse-head over graves and the corners of the private houses. This idea seems to have come to Swat from Kafristan (Kailash) where the people worship the horse-faced god called Baliman.

The Swati people have also decorated, with beautiful carvings, their household and other objects of daily use. For instance the wooden prayer seats, containers, low chairs and stands, for keeping water pots, are very rich in such designs.

The prayer seat is made of wood usually carved with different designs on the sides. It is used by the people for offering prayers. Wooden container, used for storing grains and keeping mattress, is a typical object carved with floral and geometrical motifs. Another interesting object is the wooden low chair with front seat woven in leather straps. The back seat and the legs are usually decorated with carving work. Some of
them bear the design in the shape of corinthian capital and other motifs like the rope-pattern and saw-tooth ornamentation. This is a typical chair used in old times throughout Swat and Bunir. The ladies especially used to sit on it while churning milk. The wooden stand for keeping water pots is yet another important object with front portion and legs generally carved in floral scrolls and other decorative elements.

Important among other objects of daily use are milk churners, wooden spoons, dishes and bowls, hand fans and bread folders etc. Milk churner, used by the house ladies for skimming milk and making butter, comprises a wooden churner, two other parts and a rope with handles oftenly of cock’s legs. Wooden spoons, some amazingly large with beautiful carved handles, were used in preparing meals. Wooden dishes are of various size and shapes. Typical among them are generally large with circular base and in some cases with affixed bowl in the centre which served the purpose of keeping curry etc., used to be taken with meals, especially rice. It is to be mentioned here that individual wooden bowls of different size were also used for curry, curd and skimmed milk. Hand fan is generally decorated in silken or golden embroidery work. It has silver grips from which hang tiny balls supported by silver chains. It is also provided with silken tassel held together with string usually made of golden thread for hanging purpose. Such hand fans were specially made to accompany the articles of marriage procession. Bread folder is a piece of cloth decorated with multi-coloured silken embroidery work. Such pieces were used for wrapping breads.

The people of Swat had developed an organized cottage industry. The implements so employed by them were the weaving apparatus spinning wheel and weaver’s tool, etc.

The weaving apparatus, besides its main composition, consists of a wooden shaft with pointed ends; meant for fixing in wooden supports at either ends; boat and yoke-shaped shuttles with bamboo rods fixed in the centre and also a triangular wooden object with needle-shaped iron rods used for winding threads. The entire apparatus is used for weaving the famous Swati shawls and blankets praised by Hsuan Tsang, the Chinese pilgrim, who visited Swat in the early seventh century A.C. Equally important is the spinning wheel used by the women to spin wool with it. Weaver’s tool in the same series is another important instrument which
in addition to its main body is composed of a shuttle and a bow-shaped object. Its bottom is usually carved. This implement is used for breaking up cotton in order to make it fit for mattress.

Important among the objects used for self defence were the bows, slings, powder pouch, iron pikes; swords, axes and large daggers etc. Worth-mentioning among them in respect of their composition and functions are bows, slings and powder pouch. The bow is composed of a wooden frame, usually painted, a rope, a long rod for accurate marksmanship and an umbrella-shaped iron object. The metal object serves the purpose of an arrow in this case and it is this that is released with force and is aimed at the target. In this fashion it is used for sportsmanship for the metal object is not sharp as to cause injury. Whenever it is aimed to harm some body then the sharp metal arrow is used instead of the umbrella-shaped one. There is yet another type of bow different in structure and functions from the preceding one. It consists of a crescent-shaped wooden bow, two threads and a grip held in the centre probably used for throwing pebble at the enemy. The inner surface of the bow is usually carved with floral scrolls. Such bows were perhaps introduced by the Aryans. Later on these bows have been in use among the tribal people all down the centuries in one form or another.

The sling is made of jute rope decorated some times with silken and golden threads. It was used for playing as well as for defence. A river pebble used to be thrown at the opposite party through it. It is said that the prophet David slew the giant Goliath with it.

Powder pouch is generally crescent-shaped and worked out in different material. The main body of the pouch in its unique example of workmanship, is made of horn and nicely finished. Its round-pointed part and the narrow end are made of wood. The pointed part is decorated with incised ivory objects. The main body and the pointed part are joined together by iron rivets. At its narrower part, the pouch contains a covering of brass fixed with an iron rivet above and a clamp with a ring suspended below. The ring probably meant for having a rope passed through it which kept the pouch dangling on the arm of the bearers to help in loading the old typed gun (topak) or pistol (tamancha) with ammunitions at a moment’s notice.

Certain variety of objects offers a significant feature of the games
played by the people. The objects used in such activities include catapults and bird traps etc.

Catapults, in special cases, are with colourful tassels hanging from the wooden handle. The main body is covered with rubber laces and decorated with golden threads. Tiny beads and glass pieces are also attached for ornamentation. The leather sling is usually decorated with golden embroidery. It is used for hunting birds. The leather sling holds the pebble. The hunter pulls the elastic sling towards himself and lets the pebble go aimed at the bird.

The bird trap has a crescent-shaped horn fixed on a wooden frame of the same shape and joined at the upper end with a rope covered with silken threads for decoration. A wooden rod also passes through the rope and touches the upper crescent. The lower end of the rod has a string attached to small piece of wood which raises the horn and helps in holding a grain of maize so as to catch the bird when it bites. It used to be very popular type of trap for catching birds.

Most important among the musical instruments, by virtue of their peculiar cultural functions, are the folk drums and flutes etc.

The folk drums, *damame*, are used in a pair. They are made by stretching dried skin over the edge of a hollow pot and sounded by beating with sticks. The men, barbers by profession, beat these drums in the entrance of houses on the eve of Eidul Azha and other such happy occasions like marriages, child birth or circumcisions. They are also beaten in the Pukhtun Hujras at the time of announcing certain regulations to the public in their interest.

It is significant to mention that the local girls on certain happy occasions like marriage etc., beat these drums with hands which create a sort of rhythm while performing folk-dance and singing songs.

Yet another type of folk drum, *Tambal*, which is made of wood and skin designed usually in greenish and red colours. It is a traditional musical instrument used by the tribal girls on happy occasions like Eid and marriage etc., while singing folk songs. The flute, *Shpelai*, is generally made of wood. It is a typical musical instrument used especially by the shepherds in the hill tracts of Swat. They play it while watching their flocks on the mountains.
Dress constitutes another interesting feature of the people’s life. The female wore a skirt, a shawl and a shilwar accompanied by shoes.

A typical lady’s shirt is made of cloth, generally of black colour, terminating well below the knees decorated with silken embroidery and stitched silver objects of different shapes on the front and sleeves.

A shawl is made of black cloth with bands of silken embroidery around the border. The shilwar is also made of black cloth with silken embroidery in the shape of bands along the hems. Pair of shoes which accompanied the dress is made of leather and beautifully decorated with golden embroidery work.

The women-folk also used to dress their hair by a belt-shaped head gear, Sartarune, of black cloth with multi-coloured silken embroidery work. Interesting enough is another function of such gears and that is to ward off headache and evil spirits. Fashion of wearing such types of pieces by the Dardic ladies in Swat and Indus Kohistan prevails even to this day.

The dress worn by male comprised a loose shirt, terminating well below the knees, a typical shilwar, a turban or a woollen cap, Pakool, and shoes decorated partly with golden embroidery work. There used to be an elaborate headdress in the case of wealthy people. It comprised a turban called Lungai and a pyramidal type of cap embroidered with golden threads, known as Kulah.

The most remarkable and interesting aspect of the ethnological treasures in Swat is the folk jewellery. Its history is as old as the vanity of human wishes which is in the nature of man and is born with man. The origin of jewellery lies in the desire for decoration, in man’s ambition for distinction and particularly in woman’s love of beautification in order to shine out to captivate the opposite sex.

This trend has been common to all men—especially women—all over the world in all ages. The keen desire for adornment, found its satisfaction in whatever looked pleasing to the eye in natural environments of particular localities.

How the various type of ornaments came into fashion makes a long history.
As I understand things, the myriad coloured flowers and dainty leaves of trees were the first material to attract attention for embellishment. The practice has persisted all through the ages. The heroes were decorated with crowns of leaves as in Roman times and maidens were bedecked with flowers. Even today white flowers—the symbol of purity and virginity—make the bridal night ornaments of brides. Modern belles also like the flowers as much as Mother Eve did.

But the freshness and fragrance of flowers have vanishing characteristics. Materials of more solid and lasting nature must have been sought for. White threads of silver, malleable nuggets of gold, multi-coloured stones and shells, pearls of enticing lustre must have occupied place of honour for ornamental purposes. The shapes and sittings of flowers and leaves must have inspired the designs for ornaments.

The parts of body which were selected for decoration is another matter of evolution. That which was apparent and could create immediate appeal for attraction or aggrandisement was first decorated.

As the legends go, ornaments found their birth from sources as from man's lust for enslaving other and practice of magic etc. Enslavement of those from whom harm was expected or whose escape was to be prevented came into vogue as far back as barbarous ages. Enemies were put in fetters; slaves were made to wear ear rings to mark their status. To prevent women from escape, halters were put round their necks. In times of lesser severity these practices suggested bracelets, anklets, ear rings and necklaces etc., for decoration.

Superstition has always been one factor for debasement of human mind. Belief in magic has always been man's weakness. To ward off evil emanating from hidden supernatural sources, to undo harms springing from jealous and insidious intention of hostile people, to secure love of male or female etc. etc., magical charms and amulets were worn. These practices influenced the creation of head ornaments, and arm bands etc.

But predominantly the yearning for beautification and creation of sex appeal was the principal guide in designs of jewellery and selection of parts to be decorated. Above all the everlasting persuit of female to bait, entice and waylay the male was responsible for ingenuity in creation of alluring jewellery and captivating designs.
Whether a female, the most fascinating product of nature and the most powerful influence in making life worthwhile, needs all these accessories is a debatable question. Whosoever painted a lily. But there is no gainsaying the fact that female is jewellery-mad and has uncanny ambition in using this armoury. Jewellery is therefore as essential as woman and woman is as sacred as life.

These general remarks about jewellery apply as much to Swat as to any other part of the world. However, like jewellery of every country there were special influences which shaped jewellery in Swat. It has therefore special features of its own and a definite characteristic. Its history has aspects which have peculiarity of their own.

It would take a volume to give proper treatment to the subject. Attempt is, however, made to describe some of the special features of the prominent specimens of peculiar Swati jewellery in this article.

To start off, I would like to take up the forehead ornament first. It is an ornament to beautify the forehead, made of silver, brass in the past and mostly gold at present. It evolved in two stages. First in the form of tik—sometimes consisting of two or three circular pieces joined together with a hook to its top for attaching to the hair. Out of this, with the passage of time, evolved the tika made of brass and gold which is generally shaped in two pieces held together by a bent wire in the middle and decorated with tiny circular tassels hanging from the lower edge. It is embossed all over with intricate beautiful designs.

The origin of the forehead ornament goes back to the remote antiquity, supported by a folk tale. It is said that in a certain period there was a Raja who was ruling the territory of Swat. The Raja had an exeeedingly pretty daughter. Her beauty was praised not only in the whole of Swat but also in the adjoining areas. The leading poets of the time compared her in beauty to the moon in their poems. Unfortunately that charming lady used to be often a victim of a severe headache. It was indeed a vexing problem for the Raja who was always unhappy about her headache.

Once a certain magician, so goes the story, happened to visit the capital of the Raja of Swat. The Raja told him all about his daughter and her headache. The magician prepared a charm and advised that it be
always kept on her forehead which would prove effective in curing this disease. Why not give an ornamental form to the charm, so thought the nobles of the Raja’s Court. Eventually the charm was covered in silver and coated with gold wash. The charm proved a cure, true to the words of the magician, and the silver covering with gold wash was an addition to the grace and beauty of the Raja’s daughter.

This is how, according to legend, the forehead ornament took its birth which in course of time was copied by other women-folk of Swat and thus assumed the fashion of a popular ornament for forehead. About this ornament a pushto poet of Swat has composed this couplet.

Da sro tik deh pa verbal ke laka tander deh.
Pa sal chanda deh khaista deh makh da gulsadbara.

Your golden forehead ornament is as bright as lightening that comes out of thunder.

And your face is hundred times more beautiful than rose.

Hair pins of silver are a class of ornaments which are used as a pair and called Mutki. The top pieces of the hair pins are usually circular and barrel-shaped with connected hanging chains and leaf-shaped tassels. Each pin has a hook at the top for attaching the ornament with the wearer’s hair.

The pigtail which is called bachukay, is composed of silken strings connected with silver objects. It has generally a pillar-shaped silver object with tassels having leaf-like object at the lower end. Each leaf is connected with a chain to the top of the pillar-shaped object from which come silken strings with vase-like object at the end of the first half of the pigtail. The strings then pass through these objects (vase-shaped) into a row of silver beads having at their terminal ends silver objects in the form of candles usually held in silken tassels.

Pigtail is a graceful and extremely favourite personal ornament attached by the ladies to the back of their hair.

The ear-ring is known as lakhtai or mundrai. It was made of base metal and silver in old times and also became fairly popular in gold at a later period. The upper part of such ear ornament has a tapered
hook for passing through the ear of the wearer. From the hook hang
two bead-shaped pieces connected with a rod covered in the shape of a
coiled thin wire; at the lower end of which is an attached conical object.
There is also a chain which hangs from the middle of the ear-ring to
help in reducing the burden of so heavy an ornament on the wearer's
ear. The conical part of the ear-ring is decorated with delicate granulation.
The cone-shaped ear-ring is an ornament of rare charm and beauty among
the folk jewellery of Swat. It used to take a long time for the metalsmiths
and only the talented ones could produce a piece of such fine workmanship.

We find different forms of ear-rings worn by the figures depicted in a
good many sculptures discovered from the sites in Swat. Significant among
them are the ones with square plaquette, elongated, spiral-shaped and
cylindrical with decoration of concentric rings. The Swati ear-rings for
granulated conical pendant, however, have an individuality of their own
and stand distinct from the foregoing types.

The local necklace, *ogai*, is another fascinating ornament. It was
generally made of base metal, silver and later on also in brass. It is design-
ed in the shape of crescent. It has incised geometrical designs on the
body and embossed square and round-shaped motifs along the border.
At the lower end and in the centre pieces of stones are also encased as
additional decoration. From the upper edge of the necklace emerge two
spiral-fashioned pieces which support the necklace around the neck.

Here reference can be made to the affinities of such types of neck
ornaments represented in so many sculptures found in Swat and other
sites of Gandhara regions. In these sculptures the human figures have been
shown wearing flat necklaces. It is, however, of much interest to mention
that most of the short band-shaped necklaces shown in the sculptures
represent either crescent motifs or rosette-and-sheaf decoration, while
the local necklaces are decorated with geometrical designs and other
embossed motifs, thus having an individuality of their own.

As for the crescent shape it is perhaps a foreign importation and was
introduced in Greece from Syria where it was sacred to the Moon-god.
It is also noticed in Hellenistic necklaces as pendant; although its pur-
pose was undoubtedly decorative but it had also a certain amuletic value.
Another object of importance is the local hanging necklace which is called *amil*. It usually consists of double-wheel and triangular shaped silver pieces, decorated with beautiful incised designs, terminating on a barrel-shaped charm from which hang leaf like objects connected with chains. The body of the charm, in certain instances, is made of wood but covered with silver.

The feminine bosom has always been the source of great allurement and so she always tried to cover it out of modesty; sometimes using a piece of cloth or shawl etc. Probably out of this practice evolved the hanging necklace which served as a brassiere as well as an ornament of great charm and attraction.

I might mention here that hanging neck ornaments are found in ancient Pakistan as far back as Indus Valley civilization. They are mostly made of elongated beads of terracotta and semi-precious stones. Also in the sculptures of Gandhara there are many figures depicted with hanging neck ornaments arranged in the shape of rows of beads. In this connection special mention may be made of the graceful standing figure of the so-called lady donor on display in Swat Museum. This figure has been shown wearing among other ornaments, a hanging necklace in the form of four rows of beads terminating in an oval pattern object at the lower end. From it appears that the idea of hanging neck ornament was known in the ancient past and then through the ages the local necklaces have been evolved in the present forms which of course are peculiar to the Swat region and typical in their composition to that of the ancient ones.

The armlet, *bazoband*, is an important piece of silver jewellery. Its different parts are held together by string with silken tassels. The main parts of the armlet consist of rectangular and crescent-shaped pieces through which the girl slips her arms. The hanging pieces connected with the main parts contain chain-like tassels each connecting leaf-shaped hanging objects at the bottom. This hanging part of the armlet dangled by the right and left sides of the wearer.

All the pieces of the armlet are richly decorated with beautiful incised floral designs. This is a marvellous ornament of rare beauty which perhaps has no parallel among the ornaments known so far in this region and elsewhere.
Its origin bears testimony to the charms and amuletic practices in vogue in the ancient past.

Another ornament of great interest is the silver brooch which is locally called landdai or sagai. It consists of rows of chains connecting a triangular object at the lower end from which hang leaf-like tassels along the sides and tiny balls at the lower end of the triangular object. The brooch has also connected buttons in the shape of double-headed eagle as additional ornamentation.

The double-headed eagle appears in Babylonian and Hittite sculptures from Western Asia. It is also found on an early ivory of the Geometric period from Sparta. But later on it seems to have been especially associated with Scythians and it is so believed that probably they introduced it at Taxila. From the Scythians, perhaps it legged to the tribal regions in the north and was adopted by the local jewellers in designing their ornaments.

Another interesting ornament is the belt or waistband called kamar-band. It is made of silver and consists of rectangular pieces in the main part with attached semi-circular pieces terminating in two vase-like objects at the end through which passes the string for tying around the waist. From the middle of this piece hang tassels with leaf-shaped objects at the lower end. Pieces of the belt are beautifully decorated with incised designs.

This ornament is believed to have originated out of a piece of cloth tied around a woman’s waist to facilitate child birth. Perhaps words of magic or religious charm were stitched into the cloth and in course of time this developed into a graceful piece of jewellery.

It is, however, noteworthy that there are belts or girdles from Taxila belonging to the first century A.C. These belts have been designed with fish, stepped merlons and lily patterns. The local belt or waistband is quite distinct and independent from them in its entire composition and pattern. Nevertheless, the fish pattern belts from Taxila has affinity with some of the silver brooches in Swat having fish-shaped composition. It is to be remarked that fishes as decorative elements or as amulets were common in the Indo-Pakistan sub-continent, as in other countries, from the earliest times.
Examples of the local waistband can also be noticed in a number
of sculptured pieces of Gandhara where the figures have been shown
wearing a sort of belt or girdle. Such waist ornaments are also commonly
found among some of the tribes in Afghanistan.

Bracelet, wakhay or kara, is another important aspect of folk
jewellery in Swat. There is an interesting specimen of bracelet in the shape
of double-headed snake facing each other. The significance of snake
pattern is explained by a folk tale which runs thus: A certain Raja in
Swat wished to marry a pretty girl. When she refused he ordered his body
guards to drag her and throw her into a dungeon. Soon as the guards
cought her by the wrist, two snakes appeared from opposite direction,
stung the guards and disappeared. The Raja was terrified and set the girl free.

Perhaps this legend inspired the local jewellers to produce such
bracelets. It is, however, to be pointed out that snake-shaped bracelets
are not only found in other parts of the Indo-Pakistan Sub-continent but
such examples also occur in the Hellenistic bracelets of the early fourth
century B.C. and the Roman bracelets in the period between 27 B.C.
and 400 A.C. It is difficult to tell who borrowed from whom?

Still another type of local bracelet, called bhao, is the double-
rimmed pattern with tiny balls embossed on both sides of the rim. Various
forms of bracelets are found at Taxila and elsewhere. At Taxila especially
the open-work bracelets with square clasps adorned with jewels, being the
most ornamental and probably copied from Greek prototypes belonging
to the first century of Christian era. Also we find bracelets as ornamental
elements for the wrists of the figures depicted in the sculptures from
Swat. They are either designed with square plaquette or with rows of
beads. However, the double-rimmed bracelet from Swat is basically
different from them in its shape and design. This is a typical wrist orna-
ment and has been very popular in the whole of Swat and other adjoin-
ing tribal areas.

The local finger rings, gutai, are shaped in manifold designs and
patterns. Mention may be made of the three types which are distinct.
One is crown-shaped; another with square bezel and the third has no
groove and is dome-shaped. The last one originated among the tribe
of Andilzai (Dir State) and it was from there that the jewellers drew inspira-
tion in fashioning such rings.
I may say that little is yet known about the use or character of finger-rings in the ancient history of Indo-Pakistan sub-continent. However, a few copper or bronze specimens of a simple form have been found at the sites of Harappa and Mohenjodaro. While important among the types of finger-rings unearthed from Taxila, are with plain flat or raised bezel, almond-shaped or round in form. Also a few specimens of simple finger-ring have been discovered from the sites in Swat. So it is evident that the fashion of finger-rings in ancient Pakistan goes back to a remote antiquity like that of the Mediterranean coasts and Egypt.

However, according to the local information the finger-ring is connected with an interesting legend. It is believed that a certain warrior from Swat tied a string around his beloved’s middle finger to remind her of him whenever she looked at it. Later on womenfolk tied strings around their fingers to remember something and this practice has come down even to this day. During the course of time the finger strings evolved into beautiful finger ornaments, some made of silver some of gold, some studded with coloured glass and some with precious stone.

The silver anklet is another interesting local ornament called *paikara*. It is hollow and open at the closing ends provided with a movable socket to cover the aperture. The body of anklet is adorned with incised geometrical designs and its socket decorated with various embossed motifs.

Anklets are a class of personal ornaments essentially originated in the Indo-Pakistan Sub-continent. The anklets discovered in Taxila belonging to the first century A.C. show, among other decorative elements, the sinuous vine pattern borders. These being of Greek or Western Asiatic origin which were perhaps introduced by the Greeks or still earlier, nevertheless, the very style and characteristic of the art is undoubtedly local. Also in a good number of panels which show scenes from Buddhist Mythology, there are female figures depicted with anklets of simple form.

However, the anklets in Swat resemble the ones from Taxila in their general composition but appear to be quite distinct in their geometrical and the peculiar socket with embossed ornamentation.

Interesting enough, the Swati anklets also contain small tiny balls inside the hollow cover to create a soft jingling sound so as to add dignity and grace in feminine gait.
I might perhaps add that sometimes the resemblance between the Swati jewellery and jewellery found in other lands is not so great. Sometimes it is difficult to tell one from the other; sometimes the local jewellery seems to stand out by itself.

The question who borrowed from whom is meaningless; we borrowed from each other—and that is the central theme of history as I understand it. True, I had been very fortunate to have collected a rich variety of ethnological objects for our museums in Pakistan and the legends that are connected with it but still I feel that the subject is too vast and the surface has barely been scratched. I, however, sincerely hope that this sketchy outline of a fascinating subject never attempted before in Swat will stimulate further interest among scholars to throw more light on our glorious historical past and so contribute another chapter in the study of Archaeology in our country.
PRESERVATION OF DOCUMENTS IN OUR MUSEUMS

(Plate LXII)

By

Choudhury Rehmat Ullah

The problem of the preservation of documents in the National Museum Karachi and other museums deserved to be accorded a serious thought. This has been engaging the attention of the authorities for some time past, but no remedy could be offered as the necessary equipment known as impregnator indented since 1964 was not available for the needful. The silk method which did not require any special equipment for the repairs and preservation of documents and valuable papers was never in popular use in our Laboratory as it did possess some very serious disadvantages namely:—

(a) The adhesive has an obscuring effect making the subsequent photographic study limited. The paste effuses when the document is examined under ultra-violet radiations.

(b) A good deal of weight and bulk is added to the document.

(c) The process is irreversible and the document cannot be regenerated in its original state. The process has to be repeated after 25 years but it becomes difficult owing to the irreversible nature of the previous process.

Much to our relief, the impregnator type LNO. 1323/66 manufactured by Strojothena Zegriv, Yugoslavia (Plate LXII-a) received recently has solved much of our difficulties. The document should undergo necessary repairs, wet or dry cleaning, bleaching, deacidification and fumigation prior to its strengthening in the impregnator. The bleaching and deacidification are two important and commonly employed processes. The
competency of a number of often used bleaching agents is discussed here briefly:—

1. SODIUM CHLORITE

   This is the safest bleaching agent because it does not chlorinate the cellulose fibres of the document. The responsible agent for causing the bleaching of the document is Chlorium Dioxide. The bleaching agent is prepared by adding 75 mls., of 40 per cent formaline to two per cent aq. Solution of Sodium Chlorite. It has the advantage that the document becomes safe after simple washing with water to remove Sodium Salts.

2. CHLORAMINE T

   This is a mild chlorinating agent and has the unique advantage that its bleaching properties are soon lost and do not leave any corrosive product in the document. The process, particularly, suits the water colour drawings. The re-agent can be applied locally to these areas without exposing the whole work to the action of chemicals.

3. HYPOCHLORITES

   Chlorine evolved during the reaction has a powerful bleaching action. Cellulose of the document is degenerated and permanently weakened in a prolonged action of the chemical. The document is then passed through Sodium Thiosulphate bath, which acts as antichlor. The writing in gall ink is protected before hand.

4. DEACIDIFICATION

   The acidity is acquired by the documents as they grow older or during process of manufacturing the paper. The iron gall ink which contains acid is added to the document when this ink is used for writing. Sulphur Dioxide, a product in industrial atmosphere is also absorbed in the paper which is finally converted to Sulphuric Acid and retained in the document. This acidity reduces the life of the document immediately. The documents are deacidified by immersing them in a saturated solution of lime water to neutralize the acid in the document. The document is then immersed in a bath of Calcium Bicarbonate which precipitates Calcium Carbonate. The presence of Calcium Carbonate inside the paper protects it from the future acid attacks. In case of water colour, a nonaqueous solution of Barium Hydroxide in alcohol is used for deacidification.
PROTECTIVE MEASURES AGAINST FUNGAL GROWTH AND INSECTS

Cellulose and Gelatine size, the two important constituents of documents are an excellent food for insects. High humidity is another favourable condition for the growth of micro-organisms. The attack is not long delayed if humidity is over 70% — a limit often experienced during the Monsoon at a place having a climate like Karachi. It is, therefore, essential to control humidity by use of dehydrating chemicals like silica gel inside show cases where the documents are displayed. The other useful factor for retarding the mould attack is an improvement in ventilation. The documents are sterilized by fumigation, which does not give lasting protection. The other methods involved the use of paper impregnated with fungicide which gives continuous protection over a period. Fumigation is carried out in a chamber measuring 8' × 2½' (Plate LXII-b) using Thymol vapours or Formaldehyde vapours. Other dry insecticides as para Dichloro Benzene Crystals, D.D.T. powder are also effective, where facility of fumigation chamber is not available.

IMPREGNATION WITH THERMO-PLASTIC SHEETS

The document is ready for final treatment of impregnation when other preservative measures are complete. The document to be preserved is sandwiched between two sheets of cellulose Acetate or polyethylene. Thickness of these thermo-plastic sheets is normally 0.02-0004 m.m. Cellulose Acetate process is preferably used in our Laboratory, keeping in view its advantage of being reversible. The document can be regenerated in its original state by immersing it in a bath of Acetone at room temperature. The difficulty of removing the polyethylene sheets render it unsuitable for specially valuable documents but it has an additional advantage of being cheap compared with cellulose Acetate and leaves the document much softer and more flexible than those impregnated with cellulose Acetate. Polyethylene sheets are, particularly, suitable for the impregnation of news-papers, maps and books etc.

The document is sandwiched by placing the inner insulating sheet on the outer protective sheet. Then the impregnation foil and finally the document to be preserved, taking care to prevent any folding of the document. The other surface of the document is covered with similar layers of impregnation foil, inner insulating sheet and outer protective sheet. The inner insulating sheets of starch cloth protect the documents placed between thermo-plastic foils from sticking to the outer protective
sheets. The use of tracing paper is also permissible for the purpose. It is cheaper but its durability is considerably lesser than that of the starched cloth. A protective outer coating of asbestos cardboard measuring 770 × 1,290 m.m. safe-guards the mechanical damage caused, when the document is inserted and carried through the equipment. The document is also protected against its direct contact with the hot plates of the equipment. The thermometers are set for the pre-determined temperature for plasticizing of respective foils before putting the machine into operation. The signal lamps give indication that the heating plates have acquired the desired temperature. The upper plate is lifted with the help of a switch lever. The sandwitched document is placed between the hot plates and upper plate is lowered by the same switch lever until a cracking noise is again heard. The calender rolls are put into operation by lifting another switch lever and the sandwitched document is pushed forward uniformly through the calender rolls. The switch lever is then pushed down so that the calender rolls are out of operation. The sandwitched document is allowed to cool down and finally separated from the insulating sheet. These are the stages involved in the impregnation of the document.

ADVANTAGES OF IMPREGNATION PROCESS

1. There is no change in the appearance of the document but there is a marked improvement in its durability.

2. The document can be handled for research work, without causing least damage to them.

3. The writing is made rather more legible owing to the high refractive index of Cellulose Acetate with which the document is consolidated.

4. Transportation of documents is more safe and damage caused by wear and tear is minimised.

5. The documents, so preserved become impervious to ink and grease stains.

6. The document is subjected to a high temperature during the process and the insects are destroyed.

7. The document can be regenerated in its original state whenever desired.
"A book that is shut is but a block"

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