CHAPTER 2

Evolution of Settlement Pattern at Mathurā
Chapter II: Evolution of Settlement Pattern at Mathurā

EVOLUTION OF SETTLEMENT PATTERN AT MATHURĀ

1. Introduction

The aim of this chapter is to review the broad developments of and changes in the settlement pattern of Mathurā and the appearance in Mathurā of those elements of culture, which may be considered urban culture. Our approach will be primarily archaeological, but we shall also take into account such textual, inscriptive and other evidences as are available and relevant to our theme. For understanding the growth of ancient Mathurā as a settlement we have to depend primarily on available archaeological materials. However, it is not easy to utilize the archaeological material satisfactorily; archaeological material, including sculptures found since 1836, in Mathurā or around it, in most cases was collected without keeping in view their stratigraphic or structural sequence or even without reference to the exact findspots. This chapter will be divided into two sections:

1. Sequence of culture change in Mathurā in relation to land. This section will also be divided into two sub-sections:

   a. Geography of the Region.

   b. Image of the Region in Tradition

2. The settlement pattern:

Mathurā remains amongst the most inadequately excavated important urban sites of India. One of the reasons for this neglect may perhaps be the location of this site, the modern built up area is spread over much of the ancient settlements.
Section: I

a. GEOGRAPHY OF THE REGION

Mathurā is a district in the northwest of Agra division and forms a part of the Yamuna basin. It lies between the latitude 27°14' and 27°58' N and longitude 77°17' and 78°12' E. The district is bounded on the north by the district of Aligarh (U.P.) and Gurgaon (Haryana), on the east by that of Aligarh, on the south by the district of Agra and on the west by that of Bharatpur (Rajasthan).\(^1\)

The district has an area of 3769.5 sq. kms.\(^2\)

Mathurā lies between what has been called Delhi-Agra filter zone,\(^3\) to the immediate west of the Upper Gangetic Basin which defines its intermediary position between the Indo-Gangetic divide and the Punjab plains on the one hand and the stretch of the Ganges basin on the other. In relation to western India, the zone holds the approaches to the great Malwa passageway. When one considers also one of the major structure lines of Indian history, 'the Delhi Aravalli Axis and the Cambay node,'\(^4\) this line runs from about Mathurā, on the Yamuna above Agra along the Aravallis to the Gulf of Cambay. Mathurā can be shown to have had affinity with this line particularly in periods when the north western part of the sub-continent, rather than the Ganges basin, became the centre of political gravity.\(^5\)

Geologically, Mathurā is a part of the Indo-Gangetic alluvium and it is characterised as a perennial nuclear region of settlement\(^6\) as it corresponds to a

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2 Census of India, 1961, Part IIA, p. 46.
6 B.Subba Rao, Personality of India, Baroda, 1958, p. 12 for the concept of perennial nuclear regions or areas of the attraction and the areas of relative isolation.
major river system i.e. the Gangetic river system and as an area of attraction for the purpose of settlement.

Topography

Mathurā is also located close to the arid zone where the soil is infertile and supports only grassy growth with little or no tree vegetation.\(^1\) Dumat soil is found in Mat, Sadabad, and northern tract of Chatta which was once comprised in the old pargana of Kosi. It varies from dark to yellow to brown in colour. The most prevalent soil is Piliya or light loam which has a large admixture of sand. As its name denotes, it is yellow in colour and is more workable after rain than dumat. It varies considerably in quality, the better forms being equal to dumat, but the inferior varieties differing little from Bhur. Pure clay is only found in the low lands which are known as dahar. It is hard and unyielding and except in years of favourable rainfall cannot be worked with plough. Bhur is almost pure sand found in undulating hillocks.\(^2\) In the ravines of the Yamuna, generally known as behar, cultivation is not extensive.\(^3\)

Clay, suitable for making bricks, toys and utensils, is found almost everywhere in the district. Kankar is abundant in the district, particularly in the bangar (the olden Pleistocene alluvium) and that found east of the Yamuna is larger hard and has an ashy blue colour while that of the west is small soft and lighter in colour. Black kankar which is used in masonry work is found in Sadabad Tahsil. Kankar is also used for making lime as the district produces no limestone.

The district lies in the basin of the Yamuna which traverses through the central part of the district from the north to the south and divides the district into two physical units – the eastern or trans-Yamuna and the western or cis-Yamuna tract. The district may be described as a plain except for low hills and few scattered

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\(^3\)D.L. Drake & Brockman, *Mathurā-A Gazetteer*, p.6
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spots which rise on the Bharatpur border. The trans-Yamuna tract comprising the Tahsils of Mat and Sadabad is a part of Ganga-Yamuna doab. The land drops gently from the north to the south to the south east. This tract is carefully cultivated and is irrigated both from the canal and wells. Luxuriant crops and fine mango grooves indicate the fertility of the soil. Agricultural population is dense in this part of Mathurā.

West of the Yamuna, the cis-Yamuna tract includes the Tahsil of Chatta and Mathurā. The surface is slightly hogbecked, its line of elevation lying though parallel to Yamuna, at some distance both from the river and the Bharatpur boundary. To the west of the tract are outlying ranges and detached hills of the Aravalli system. These hills are of ancient quartzite and the largest is the Govardhan hill which extends altogether for about five miles. The old Gazetteer of Mathurā states that the chief natural peculiarity of the district was its absence of river. Due to this the arable land was classified first according to the opportunities for irrigation and second according to accessibility.

The Yamuna has frequently changed its course in this region and the old course can be traced both to the east and west of the river. The location and identification of sites therefore are dependent on a study of changes in the river course at particular periods.

According to Possehl's study in Gujarat, stretches of land along river banks provide the most convenient locations for the study of old settlements. Since their annual flooding would, by removing tree seedlings, prevent the generations of

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1 E.B. Joshi, Uttar Pradesh District Gazetteer: Mathurā, p.4.
2 Ibid.
3 D.L. Drake & Brockman, Mathurā - A Gazetteer, p.3.
4 Ibid, p. 3.
5 Ibid, p. 5.
8 Ibid, p. 4.
forests, this would facilitate colonization without large investments of efforts in clearing trees. By the same token easy routes of communication can also be established. Settlements would be restricted to the river banks until some factors such as population pressure, drove the inhabitants to the expensive task of colonizing interior areas. While the explanation is offered with respect to Gujarat, the principles involved in it can also be applied to explain the location pattern of settlements in the Ganga-Yamuna basin, especially with the eastern tract of Mathurā which had thicker vegetation.

Lines of drainage pass through the eastern tract while the higher water levels provide for the greater number of wells than in the west. Finds of votive tanks in the excavations and numerous references to the construction of wells, tanks and water reservoirs for religious purposes in inscriptions suggest that the practice of providing water facilities through construction of tanks may have also been followed in the countryside while it promoted the supply of water for both drinking and irrigation. Till recent times a good part of Mathurā district was irrigated by the rahat or Persian wheel system, but this contrivance was not known in the early centuries of the Christian era.

The vegetation in the distinct is of dry deciduous type and the original scanty tree species include Faras, Pilu, Cheonkar, Reonj, Babul, Kharjal, Kadam, Karil, Hins and Bans. Other trees and shrubs do not differ from those in the Gangetic doab though hilly out crops at Barsana and elsewhere produce some Dhau, Kadam, Pasendu and Pilukham.

The archaeological reports of the faunal material collected from different parts of

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1 H.C. Conybeare and F. Fisher, *Statistical, descriptive and Historical Account of the North-West Province of India*, p.10
Mathurā give vivid picture of man-animal relationship and to some extent food habits of the people of Mathurā and impact of some animal species on their economy, during 6th c. BC to 3rd c. AD. The largest collection of cattle, sheep and goat bones come from Period II and these three species forming the largest chunk of the collection from Mathurā indicate that from 4th century BC onwards cattle, sheep and goat breeding was the principal occupation of the people, augmented by agriculture.¹

Available evidence clearly points out that there was gradual increase in the number of cattle, sheep and goat from period I to period II and III and in period IV there was sudden decrease in number. The reason for this is not clear. Presence of marks of cutting, splitting, chopping and chewing and burn marks only in bones of cattle, sheep and goat and in fowl indicates that these animals were preferred for meat. There was decrease in the number of cattle bones with cut-marks from period III onwards is indicative of the fact that beef eating slowly fell into disuse from 2nd century BC onwards whereas meat of sheep and goat continued to be preferred.²

### Total Collection

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<td>3</td>
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<td>2</td>
<td>25</td>
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Recovery of only a few pig and dog bones from the habitational deposits of

² Ibid.
Mathurā shows that these animals were not much in favour as they were considered unclean and were not allowed to roam freely inside the township. We have evidence of horse from 4th c. BC. Probably it was kept only by a few and was used for transportation.\(^1\)

The climate of the district is characterized by an intense hot summer, a cold winter and general dryness throughout the year except during the south west monsoon. The year may be divided into four seasons, winter from December to February is followed by summer which continues till the middle of June. The south west monsoon then ushers in the rainy season which continues till the end of September. October and November constitute post monsoon season\(^2\).

The significance of climate for understanding history of settlements is increasingly being recognised by historians. The plotting of climatic change is now possible as a result of palaeo-botany. The climate of northern India in 3rd millennium BC appears to have been wetter than in the 1st millennium, although even at a later date it was probably not as dry as it is today. The gradual climatic change towards dryness may have led to the creation of desert in northern Rajasthan.\(^3\) The important climatic features calling for particular attention are the timing and quantity of rain which in a pre-dominantly dry farming area will have crucial impact.\(^4\) The mean average rainfall of Mathurā district is 24.42", the bulk of which occurs during the months of July and August. Among the Tahsils, Mathurā appears to receive the most rainfall, its average is 26" and Mat with an average of 22.92" receives the least.\(^5\) Given the importance of timing, the District Gazetteers are surprisingly uninformative beyond stating that variability of timing outweighs the regularity of the amount of rainfall leading to

\(^{1}\) Ibid.
considerable uncertainty year after year.

As has been mentioned earlier, from the physiography of Mathurā it is evident that the modern district of Mathurā consists of two tracts, which have little or nothing in common between them beyond the name which unites them. Its outline is that of a carpenters' square of which the two parallelograms are nearly equal in extent, the upper one lying due north and south and the other at the right angles to it stretching eastward below. The eastern parallelogram (or Trans-Yamuna) comprising the paraganas of Jalesar, Sadabad and half of Mahaban is a fair specimen of the ordinary character of the doab.\(^1\) It has greater potential for agriculture\(^2\) and forms the most valuable part of the district for the purpose of farmers and agriculturalists. Agricultural population is dense in this part\(^3\). The Chinese pilgrim Hieun Tsang described the soil of Mathurā as rich and fertile specially adapted for culturation of mango, grain and cotton\(^4\). This description may apply to the eastern half of the district along the doab.

The western parallelogram though comparatively poor in natural products, is rich in its mythological heritage\(^5\). This tract had greater potential for pastoralism. Most of the vegetation of this tract forms good natural pastures. The principal grazing grounds are the Yamuna ravines\(^6\). Two kinds of mango trees were grown in the orchards: the small species, the fruit of which when young was green and became yellow when ripened and the great species the fruit of which is green throughout\(^7\).

**Image of the Mathurā Region in Tradition**

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\(^3\) Ibid.

\(^4\) S. Beal, *Buddhist Record of Western World, Si-Xu-Ki*, p. 212-213.


\(^6\) Ibid.

\(^7\) S. Beal, *Buddhist Record of the Western World, Si-Xu-Ki*, p. 212-213.
In ancient literature Mathurā has been mentioned variously as Madhurā, Madhupurī, Sauripura or Suryapura, Surasenoi etc. The term Madhura is the variant of Mathurā, the difference being merely phonetical. The Jainas call it by the name Sauripura or Suryapura. Madhupuri, according to the Rāmāyana was built by the gods (iyam Madhupuri rāmya Mathurā devanirmita). It would not be proper to infer much from this statement as the tradition itself is of mythical character and of a relatively late origin. Madhupuri which was once the abode of Madhu, father of Lavaṇa, is said to have been founded by Śatruṅgaṇa.

Vraja in Tradition

Vraja another synonym of Mathurā region, however is traditionally somewhat meaningful, for it specifies literally ‘a land of roamers’ and ‘a station of cowherds’. The origin of the term is associated with the early stage of occupation of the area by roaming pastoral groups. The whole of the Brāj mandal was pasture and woodland, and villages are encircled with the belts of trees. These are variously designated as ghana, jhari, rakhya, ban and khandi and were often of considerable extent. The really old local names indicate the pastoral character of Mathurā ‘Gokula’ means originally ‘a herd of Kine’; Govardhana ‘a rearer of kine’, Mat is so called from ‘mat’, a milk-pail, and Dadhigaon (contracted into Dahgaon) in the Kosi Paragana, from ‘Dadhi’ (curd). Thus too, Vraja in the first means ‘a herd’ from the root ‘Vraj’ to go in allusion to the constant moves of nomadic pastoral groups. And hence it appears that the earliest places for Kṛṣṇa’s adventures both Gokula and Vraj are used to denote, not the definite localities now bearing those names, but the sites temporarily used for stalling cattle. Absence of attention to this archaism has led to much confusion in

2 Sacred Book of East, XLV, p.112.
3 Valmikiya Rāmāyana, Uttarakāṇḍa, Sarga73, Sloka5, Lahore, 1947, p.257
4 *Vīra Purāṇa*, Chapter 4.
6 F.S.Growse, *Mathurā: A District Memoir*, p.73
7 Ibid.
8 F.S. Growse, “Sketches of Mathura – Brāj Mandal, p.,65
assigning sites to the various legends\(^1\).

The word Mathurā is also connected with the sanskrit root, ‘math’(to churn)\(^2\). *Harivamśa Purāṇa* describes it as, “a fine country of many pasture lands and nurtured people, full of ropes for teetering cattle, resonant with the voice of the sputtering churn, and flowing with the butter milk; where the soil is ever moist with milky froth, and the stick with its circling cord sputters merely in the pail as girls spin it round.”\(^3\)

The scholars explain the name Mathurā as an allusion to *Madhu-manthana*, a title of Krṣṇa, implying the destroyer of Madhu, the demon\(^4\).

**Śūrasena in Tradition**

Literally, the term Śūrasena denotes the people whose army is made of heroes\(^5\). It may be pointed out that a prince of Yadu lineage (a son of Kartavirya Arjuna) was called Śūrasena\(^6\). The *Bhāgavata Purāṇa* states that Śūrasena, the lord of the Yadus, dwelling in the city of Mathurā, ruled previously in the region of Mathurā and Śūrasena. From that time it was the capital of the Yādavas\(^7\). On the other hand, the Puranic statements indicate that Śūrasena was the name of the son of Śatrughnā. He ruled over Mathurā\(^8\). Another tradition described Śūrasena as a great grandson of Andhaka and son of Bhima Satvata. A Puranic tradition speaks of one Sura as a grand father of Krṣṇa\(^9\). All these contradictory statements indicate confusion in Indian tradition about the origin of the name of the country of Śūrasena. In the *Manu Saṃhitā*, the Matsya together with Kuru-Kshetra, the Pancāla and the Śūrasena kas comprise the holy enclave of the Brāhmaṇa sages.

\(^{1}\) F.S.Growse, *Mathurā: A District Memoir*, p.73.
\(^{2}\) Ibid.
\(^{3}\) *Harivamśa Purāṇa*, 3395
\(^{6}\) *Matsya Purāṇa*, 43, 45-46.
\(^{7}\) *Bhāgavata Purāṇa*, X, 1, 27-28
\(^{8}\) *Vāyu Purāṇa*, 88, 184-186.
\(^{9}\) Ibid, 96, 144, 172.
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(Brahmarshi desa)\(^1\). Here Manu clearly intends Mathurā by Śūrasena when he included the country with Kurukshetra, Pancāla and Matsya in the region of Brahmarshi as distinguished from Brahmavarta.

The country around Mathurā developed into one of the sixteen Mahājanapadas.\(^2\)

Section II

a. Proto-Historic Background:

Before we discuss the history of the growth of settlements in Mathurā and the settlement pattern in the early historical period in Mathurā we cannot ignore the archaeological finds which relate to indicate Mathurā’s proto-historic beginnings. The available radio carbon dates for Mathurā suggest the association and interrelationship linking BRW and PGW using groups to the first half of the first millennium BC\(^3\). This chronology is supported by the dates of PGW occupations\(^4\), which generally range between 600-400 BC indicating that any evidence of Mathurā’s BRW-PGW association should either be of that chronological span or precede that period. Moreover this chronological assessment agrees with M.C.Joshi and A.K.Sinha’s dating of Mathurā, Period I to c.600-400 BC\(^5\). Stratigraphic and chronological evidence indicates cultural affiliation between BRW and PGW people in Mathurā.

In initial excavations at Mathurā in 1973\(^1\) PGW pottery was found on the surface, and Plain Grey Wares and Northern Black Polished Wares similar to those of Hastinapur (which had an initial PGW occupation) were associated with the first occupation. Thus the earliest occupation of Mathurā appears to have been

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\(^1\) Manu Samhita, 11.19.
\(^4\) V.Tripathi, The Painted Grey Ware: An Iron Age Culture of Northern India, Delhi, 1975, p.135.
undertaken PGW related group. Recent excavations at Ambarish Tila\textsuperscript{2} however located Proto-Historic ceramics, Black Slipped Ware, and Coarse Black and Red Ware in the initial occupation. The juxtapositioning of PGW and BRW ceramic at Mathurā and other sites indicates a cultural connection rather than separation between Proto-Historic and Early-Historic cultures. Moreover, this conclusion co-relates with other recent archaeological reinterpretations for this area including:

1. Establishment of a continuity in cultural sequence linking the Proto-Historic period with the Early-Historic period\textsuperscript{3}.

2. The accumulation of evidence suggesting an independent development of iron technology in the subcontinent\textsuperscript{4}.

3. Fundamental questions have been raised about the current concept of Indo-Āryan invasion as an explanatory model in south Asian cultural history\textsuperscript{5}. These developments have profound implications for interpreting early historic period and the emergence of urban centres such as Mathurā and other sites.

Recent excavations uncovered artifacts with a known Proto-Historic association\textsuperscript{6} suggesting that the history of settlement of Mathurā goes back to that phase which represents the Proto-historic phase of the entire upper Gangetic region. These sherds each of Black Slipped Ware and Black and Red Ware were found in period I. By themselves six sherds would not be convincing evidence for a Proto-Historic connection if it were not for two factors:

\textsuperscript{1} \textit{IAR}, 1974-75, p. 48-50.
\textsuperscript{3} J.G. Shaffer, “Mathurā: a Proto-Historic Perspective”, p.171.
\textsuperscript{5} J.G. Shaffer, “Mathurā: a Proto-Historic Perspective”, p.171.
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1. Black and Red Ware and Painted Grey Ware pottery have been associated with early occupations at several sites which continued to be occupied into the Early Historic period.

2. The accumulating evidence that the PGW pottery itself has a direct connection with Proto-Historic period.

Growth of Settlements in Mathurā District

Despite intermittent explorations spread over more than a century, primarily aimed at recovering antiquities, Mathurā remains amongst the most inadequately excavated important historical sites of India, one of the reasons being the location of modern built up area over much of the ancient settlements. The sequence of occupation at Mathurā has been treated in terms of five periods, I-V:

I. Period I: from circa sixth century BC to closing decades of fourth century BC,

II. Period II: from closing decades of fourth century BC to circa second century BC,

III. Period III: From circa second century BC to about the first century BC,

IV. Period IV: from the beginning of the first century AD to about third century AD,

V. Period V: from circa fourth century AD to the close of sixth century AD.

The mound of Sonkh, as a result of excavations contains from the highest to deepest 40 levels, out of which the relevant levels for us are:

2 For the excavated sites of the Mathurā city along with the sketch plan showing ancient fortifications, see map 1, and for the archaeological sites (excavated and explored) of Mathurā city see map 2 and of Mathurā district, see map 3
3 IAR, 1974-77; See the resume of finds at Mathurā during Archaeological Excavations: 1973-77; also see fig. 1: The Cultural sequence derived from the Excavation Reports.
I. Level 37 to 40 PGW & BRW period corresponding to Period I of Mathurā,

II. Level 35 to 36, Pre and early Maurya,

III. Level 33 to 34, Maurya, Both II & III correspond to period II of Mathurā,

IV. Level 31 to 32, early Śuṅga,

V. Level 29 to 30, middle Śuṅga

VI. Level 27 to 28, late Śuṅga,

VII. Level 23 to 26, Pre-Kusāṇa to post- Śuṅga, IV, V, VI & VII correspond to period III of Mathurā,

VIII. Level 16 to 22, Kusāṇa, corresponding to period IV of Mathurā,

IX. Level 14 to 15, Gupta corresponding to period V of Mathurā

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**Period I (600 BC – 400 BC )**

**Mathurā:**

Archaeological excavations indicate the beginning of a settlement around Ambarish Tila situated near the Yamuna and in the northern part of the modern city. The beginning of a rural settlement around Ambarish Tila is now archaeologically datable to a period ranging from 600 BC to the closing decades of the fourth c. BC\(^1\). This period is represented by the use of Painted Grey Ware (PGW) and also perhaps in the later phase of occupation by the Black Polished ware\(^2\). Discoveries of mud floors indicate that people used to live in mud built houses or huts.\(^3\) This evidence makes it clear that there was a pre-Mauryan

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\(^1\) *IAR*, 1974-75.
\(^2\) Ibid.
\(^3\) Ibid.
Map 1

Chamunda
Chaurasi
Gokarneshwar Mounds
Jai singhpura
Ambharish Mound
Katra Mounds
Mounds Mounds
Govind Nagar Mounds
Krsna janma Bhumi
Kankali Mounds
Chaubara Mound
Govind Mounds
Palikhera
Maholi
Naglajand
Kankal Mounds
Holi gate
Museum
Saptarshi Mound
Gosna
Lohban
Gopalpur
Madhopur
Rawal
Jamalpur Mound
Tantura
Chaubara
Hound
_N_ Scale: 1" = 1 Mile

IMPORTANT SITES OF MATHURA CITY

Map 2

Fig. 1

Source: M. C. Joshi, Mathura – 1975-76, Schematic Section.
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settlement at the site of Mathurā. It would appear as though in this period there was a local development of settlements of a markedly Mathurān character. Both PGW and BRW have been found in the vicinity of Mathurā at Sonkh.¹ Such sites could provide archaeological correlation for a settlement of the phase of the Śūrasenas².

Structural activities:
Period I can be divided into two structural phases:
(a) Sub period I A which is
(i) represented by excavated floor level with post holes³;
(ii) and a deposit of nearly 80cms.thickness comprising, structurally, a mud floor superimposed by a mud platform⁴.

b) Sub period I B is associated with the remains of a few mud floors⁵.

Sonkh
The excavations at Sonkh⁶ reveal that PGW levels with an admixture of Black and Red Ware (BRW) preceding the Mauryan phase, provides evidence of post holes and reed impressions and mud plaster. This evidence suggests the use of local wood⁷ and of grasses.⁸ It seems that the environment was well exploited for the house building in this period.

The excavations at Sonkh also reveal that the settlers preferred to build their homes on a somewhat high level in order to protect them against possible inundation. For the early PGW period at Sonkh the river branch formed the

² See chapter on Political History.
³ JAR, 1975-76, p.54.
⁴ Ibid.
⁵ Ibid.
⁷ The wood used may have been Nim , F.S.Growse, Mathurā A District Memoir, p.72, 358) Dhak or Babul (for use of woods see Wealth of India, Raw Materials, Vol. I, Delhi, 1948, pp.8, 144, 152.
⁸ Reed impressions were possibly of Munj grasses which grew well on alluvial banks of streams , Ibid, Vol.IX, Delhi, 1972, p.98.
eastern boundary of the settlement. Sonkh excavations do not indicate any kind of fortification in this period like that of historical times. An interesting feature within level 40 is a system of two parallel running ditches of different width and depth with a small rampart in between. The bigger ditch, partly more than 2.75 m. wide at the top, with the upper edge, at about 14.5 m. was ca. 2.20 m. deep ending on the level of ca. 12.30 m. The bottom of the smaller ditch, ca. 0.70 m. wide lay at 13.30 m., ca. 0.80-0.90 m. beneath the lower outer ground level. The average distance from the middle of one ditch to that of the other was ca. 4.50 m., whereas the overall measurement of the ditch system varied between 6.00 and 6.50 m. slightly from west to east in the neighbourhood of the ditches. Correspondingly, the bottom of the bigger ditch inclined. Gradually it lay about 0.45 m. higher on the western side. However it cannot be denied that these differences in height appear in a small part of the ditch system only. Thus it remains doubtful whether the whole of the ditch system was laid out in the gradient or on the rather even level. The original profile of the bigger ditch was almost trapeze shaped narrowing to ca. 0.60 m. at the bottom. The width and the bottom of the smaller ditch was 0.40 m., the original angle of inclination of the ditch embankment lay at 70 degree to 80 degree. Yet the erosion and the partial gliding down to the loose soil, the slopes of embankment showed rather varying angles of inclination in the course of the ditch. Temporary water bearing can be assumed on account of single firm alluvial layers, but it is rather doubtful whether the ditches had any perennial water body. On the basis of the upper alluvial layers it could be concluded that the ditches later on were flooded from the south and filled up the surface water streaming in, carrying with it rather loose soil. The area lying between the two ditches was banked up and raised while digging the ditches, the more horizontal line now marking the profile has to be attributed to

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2 Ibid.
3 Ibid.
4 Ibid, p.20, fig.8.
an erosion¹.

Its parapet and ditches are however a part of the enclosure of the first PGW settlements anticipating the later defensive works. It served for the protection of the people living at that time most probably still in huts made by wood and shrubs with daub. It also served the purpose of shelter for the cattle as well as protection of cattle. Perhaps, there was on the crown of the embankment palisade made of wood and shrubs in order to prevent intrusion into the area of settlement and possible inundation.

The general thickness of the PGW levels at Sonkh altogether varied between 1.00 m. in Trench 1 and over 1.5 m in Trench².

Sites of Period I:

About ten sites mostly known from explorations, which can be dated to the period I on the basis of PGW sherds have been located in the Mathurā Area and at Sonkh. They are as follows:

1. Ambarish Tila³
2. Sanketban⁴
3. Sakhitara⁵
4. Aring⁶
5. Chatta⁷
6. Katra⁸

¹ Ibid, p.20, fig.8-12.
² Ibid, p.25.
³ IAR, 1975-76, p.55.
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7. Bhutesar
8. Kankali Tila
9. Naujhil
10. Adinga
11. Sonkh

All these sites are located in the cis-Yamuna tract and most of the sites were located adjacent to the river course except for Noh Jhil which is located on the trans-Yamuna tract but that too is near river. Ambarsh Tila is near Yamuna. Sanketban is probably midway between the hills of Nandgaon and Barsana, probably adjacent to one of the old courses known as the western depressions. Circling the Barsana hills, this drains the western edge of Tehsil Chatta and the North-West corner of from Govardhan, passes through Sonkh and Bharatpur into Agra. The meandering course of Kunderban drain, near Aring, four miles east of Govardhan suggest that this was once an old stream. The location of PGW sites in this area suggests that proximity to natural water course was due to the important factors in the choice of sites. In addition, Sanketban and Sakhitara and Aring were located near hilly areas in proximity to some of the best pasture grounds.

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1 Ibid.1976-77, p 55.
2 Ibid.
3 Ibid. 1985-86, p.82.
5 H.Hartel, Excavations at Sonkh, p.85.
6 See the Map of Mathurā district.
7 F.S.Growse, Mathurā: A District Memoir, p.72.
8 Ibid.
9 Ibid.
CULTURAL ASSEMBLAGES

1. Painted Grey Ware

A definite archaeological phase in this region is thus represented by the Painted Grey Ware (PGW), a ceramic industry sometimes associated with the later Vedic people who introduced iron for the first time in this region. Now this pottery has been considered to be the hallmark of early iron age of Northern India.

PGW was first discovered at Ahichchatra during 1940-44 excavations. In a quick succession it was soon found at a number of sites. Arrival of PGW in a particular occupational deposit of a site is a very significant event indicating the cultural development. The PGW is a distinct kind of pottery of a group of people who settled down in Sutlej, Ghaggar, and Upper Ganga Yamuna.

PGW is largely wheel thrown, smooth ash-grey in colour and often painted with linear dotted or circular patterns in black pigments. Sometimes these patterns include spiral sigmas and swastikas. The PGW at Mathura represented bowls and dishes with paintings in black and occasionally in white. A few interesting designs besides popular ones include groups of parallel horizontal lines between two verticals latticed frames and hook-shaped curves around spirals.

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1 R.S. Sharma, Material Culture and Social Formations in Ancient India; Arrival of PGW in a particular occupational deposits of a site is a very significant event indicating the cultural development. This PGW is a distinct kind of pottery of a group of people who settled down in Sutlej, Ghaggar, and Upper Ganga Yamuna valleys: B.B. Lal, “Excavation at Hastinapur and other explorations in the Upper Ganga and Sutlej basins”, Ancient India 10 & 11, 1950-52, p. 150.

2 B.B. Lal, tentatively identifies it with the early Aryans, Ibid, pp. 150-151.

3 N.R. Banerjea, observed that people who brought the PGW also introduced iron technology in India. Iron Age in India, 1965; R.S. Sharma, Material Culture and Social Formations in Ancient India.


6 B.B. Lal gives a list of sites of PGW known until 1953. See “Excavation at Hastinapur and Other Explorations in Upper Ganga Basin”, pp. 138-41

7 Ibid, pl. xxv – xxx.

8 JAR, 1975-76, pp.53-55
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Among its most prominent forms are straight sided bowls and dishes with incurved sides. It has a fine grained and uniformly thin grey core. It is made of well laved clay. An examination of the thin section of the ware revealed an insignificantly small number of heavier particles of feldspar, quartz or limestone. It is also evenly baked in an enclosed space where heat could be evenly distributed. At Sonkh the typical PGW has a grey core of a very fine clay texture and is decorated with comb painted geometric, abstract and symbolic ornaments, swiftly flung on the outer and inner surface in black or dark grey colour or even in brownish or greenish shades. With this ware dishes with convex bottom and carrinated or incurved walls are conspicuous, accompanied by hemispherical bowls, tulip bowls and other types of breakers. Some of the vessels seem to be made of potters’ wheel but others are made by moulding base and building up the wall on a turntable. The wheel thrown pots have either turned or beaten bases.

It appears that on the whole not only individual motifs, but entire families along with principles of design were restricted to individual sites. At the time a common pool of geometric designs is maintained and this is supported by the limited repertoire of motifs published from such sites at Mathurā, Sonkh and Ahichchatra. Although the evidence is too fragmentary to be conclusive it may be hypothesized that PGW served complementary and diverse ends. The uniformity of its manufacturing process and the use of simple geometric designs over the entire Ganga-Yamuna doab may perhaps be seen as reflecting the widespread adoption of a new ideology, while the restriction of more

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4. Ibid, no. 1.33.
5. Ibid, Fig. 82.
6. Ibid, p. 357
7. *IAR*, 1975-76, p. 54, Fig. 5
complex designs to individual sites may be taken as indications of the diverse ethnic affiliation of the people who were using it.

At all the excavated sites it occurred in well stratified sequence. At Hastinapur, Atranjikhera, Bairat and Noh, it occurred in distinct layers above those Ochre coloured Pottery (OCP) and below the levels of Northern Black Polished Ware (NBP), another distinguished ceramic industry of India. From Mathurā the PGW in the stratified context was found only at Ambarish Tila (MTR-8).

The statistical data for calculating the percentage of this ware is not available for all sites. At Atranjikhera its incidence ranges between 3% to 10% of the total excavated assemblage pottery. Though no statistical information is available for Mathurā from all available indications, it seems that the percentage of the ware at Mathurā (only few sites available) is far below that of Hastinapur and Atranjikhera. Even at Hastinapur, only 58 sherds of this ware were available.

I. Associated Wares

The other wares associated with PGW were:

i) Plain Grey Ware

ii) Black and Red Ware (BRW)

iii) Red Ware

iv) Ochre Coloured Pottery (OCP), only at Mathurā,

v) Northern Black Polished Ware (NBP)

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3 Nine samples from Mathurā excavation subjected to C-14 test, as many as seven belong to various levels of period II and only one each to Pd. I (in its later phase) and Period III. See M.C. Joshi & A.K. Sinha, "The Chronology of Mathurā," *Purātattva*, No. 10, pp. 41-42.

4 B.B.Lal, "Excavation at Hastinapur and other Explorations in the Ganga and the Sutluj Basin", pp. 34, 44. Out of 58 specimens of PGW, 17 are from early levels of PGW deposits (Pd. II), 11 from mid level, 13 from late level, 13 are unstratified, 3 from an accumulation following the erosion and 1 is unlabelled.
(i) **Plain Grey Ware:** Plain Grey Ware of fine fabric with forms like bowls and dishes are similar to the PGW except that they are devoid of any paintings. Its number is also restricted along with PGW which itself does not occur fairly in good number at Mathurā. At Sonkh, the Grey Wares are made of cruder fabrics and walls are thicker than PGW. These types are wheel thrown with roughly beaten or scrapped bases. The bowls and dishes and cups and jars of this Grey Ware are occasionally covered with a black slip. In a few cases, the bottom shows, on the inside stamped rosette ornaments.

(ii) **Black and Red Ware:** Black and Red Ware of inferior quality has been found at Mathurā. At Sonkh, BRW consists like PGW of more or less hemispherical bowls, tulip bowls and other types of beakers. The Sonkh specimen of this ware carries no ornaments.

Like PGW some of the BRW vessels seem to be made of potters’ wheel but again like PGW, others are made by moulding the base and building up a wall on the turntable. The wheel thrown pots have either turned or beaten bases. BRW potteries along with PGW are storage jars, water jars, bowls, jarlets and cauldrons of less refined clay and texture of brick red colour, either wheel thrown or definitely in the case of storage jars, coiled and beaten sometimes even showing ribbed paddle marks. Black and Red Ware exists along with PGW at all four levels 40 to 37 at Sonkh. Suddenly at level 36 it ceases to exist.
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(i) **Red Ware:** This ware is also known as utility ware. At Sonkh\(^1\), a single, wheel made Red Ware vessel has been found which is the largest known pottery in the PGW period. Its find place was close to a fire place, thereby suggesting that it was used as a water vessel.

(ii) **Ochre Coloured Pottery (OCP):** Ochre coloured pottery has been found at Sonkh.\(^2\) A water jar found at Sonkh was wheel made slightly embossed, formed like a lota\(^3\).

(iii) **Northern Black Polished Ware (NBP):** At Mathurā (Ambarish Tila)\(^4\) 17 sherds of NBP were found in association with PGW in Ib.

**Conclusion:**

The reconstruction of the society from the archaeological evidence suggests simple, small settlements of cultivators and cattle raisers to begin with. There is little evidence of any high profile life style. By using literary evidences with their meagre historical contents alone, it is difficult to visualise the gradual evolution of ancient Mathurā as a settlement. However, when combined with archaeological findings, the image of early settlement in the Mathurā district may become more intelligible. For example, the statement of the Buddha as preserved in early Pali literature\(^5\) about the poverty of Mathurā reflected in its dusty character, undulating ground and difficulties in obtaining alms, agrees with the character of Mathurā's earliest settlement i.e. an ordinary village in period I.

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1 Ibid, Fig. 20p.78
2 Ibid, Fig. 21
3 Ibid, p.86.
5 *Anguttara*, II, p.256.
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Period II (Closing of fourth century BC to second century BC)

Settlement pattern

Mathurā:

Structural Activity: Excavations at Dhulkot area of Mathurā (see the map)¹ have revealed a mud fortification (closing 4th c. BC – 2nd c. BC) around the settlement of the site. The fortification is taken to date back to the Mauryan period or just prior to it², judging by the characteristic remains from the core of the fortification such as NBP ware sherds and terracotta animal figurines. Beginning as a small PGW settlement, the Dhulkot area became an extensive urban settlement (360 ha. or more i.e. the total combined size of several settlements)³ fortified by a massive wall of mud forming a longish crescent on plan with Yamuna in the east. This shape is in conformity with Puranic description⁴. Except in the direction of the river, there could be a moat on the three of other sides where regular silt deposits occur immediately outside the fortifications. It is therefore likely that the fortification was strengthened in later periods. The beginning of fortification around a settlement which had been in existence earlier may have been of political significance. Further fortification by itself need not imply an urban centre, but continued fortification, accompanied by other characteristics features of what later came to be recognised as urban settlements may suggest that fortification was a function of an urban settlement in specific context⁵. There is also the distinction between urban activity within the

¹ IAR, 1974-75, p.53-55
² However comparable fortifications at various centres at Ganga basin have been dated to two chronological periods (I) 600 BC (II) 200-100 BC, when the Mauryan empire had broken up and local dynasties were cropping up. A. Ghosh, The City in Early Historic India, p.66.
³ The city walls of Katra area in Mathurā has been wrongly attributed to the Kusāṇa period by Stuart Piggot (see his monograph ‘Some Ancient cities of India), IAR, 1974-75, p.55.
⁴ Harivamśa Purāṇa, 3100.
⁵ Though the city walls of Mathurā are yet to be excavated, the available evidence suggests that the builders of ancient mud defence walls(fortification) utilized the chain of natural mounds for its construction. see IAR, 1974 - 75. Similar walls at Sankisa and Chakranagar also remain unexcavated; see D.K.Chakrabarty. The Archaeology of Indian Cities, p. 224.
fortified area as is frequent in settlements moving towards becoming urban centers and activities outside the area of fortification, which is more common in the cities of some standing.\(^1\)

The fortifications in Mathura suggest that by the end of the Nanda age or during the Mauryan period, the locality was considered important enough to be fortified, obviously for ensuring protection to its wealth and residents. This period is marked by a stage of expansion of settlements in a large part of the fortified area\(^2\) by a natural growth of cities population.

Within the Mauryan period, the house floor was made of mud, while the roof was made of tiles\(^3\), houses were normally associated with the ring wells of 55-99 cms diameter. The use of baked bricks for building purposes had already started in this period but was confined to a few structures in one case MTR-9 that is northern extension of Katra mound. Large sized bricks 64 X 42 X 7/9 cms were used as veneering material on the face of the mud platform serving as the base of the house\(^4\). We have evidence of three pits containing ash, fragments of animal bones, terracotta figurines, terracotta beads, sherds of NBP and Red Wares, fine Grey Ware\(^5\). The pits appear to have some ritualistic purpose, in another excavation at Katra site, one of the mud platforms had a row of post holes and circular pits and marks of burning\(^6\). At MTR-7 i.e. habitational area, some circular pits were found along with animal bones and ashes\(^7\). A dislocated soakage jar forming a jar was also encountered\(^8\).

\(^1\)M.C. Joshi think that the similarity between this fortification and that of Sravasti seem to suggest that they were popularly built on kind of elementary planning; A.K. Sinha, *Excavations at Sravasti*, Varanasi, 1959, p.10, Fig. I


\(^3\)Ibid, 1974-75, pp. 54-57.

\(^4\)Ibid.

\(^5\)Ibid, p.55

\(^6\)Ibid,1975-76, p.53.

\(^7\)Ibid,1976-77, p. 54-55.

\(^8\)Ibid
Thus the excavations at Katra have provided evidence of Mauryan levels of transition from rudimentary structure to well defined buildings of fired bricks and appurtenances of urban living in the form of floors, walls, drains and ring wells. The earlier excavations unearthed a copper smith furnace workshop. These finds would endorse the probability of a demographic increase with concentration of population as well as some evidence of crafts production, both of which could point to a process of urbanism, more recent excavations have yielded terracotta figurines associated with this period and animal figurines, specially elephants.

Sonkh (Levels 36 – 32):

The excavations at Sonkh unfold a similar sequence. In the early Mauryan times, in levels 36-35, mud was common material for the construction of houses. In level 35, the ground plan was circular with an outer diameter of about 3.75 mts. A thick layer of ashes within the wall and burnt mud plaster on the inner side allow the conclusion that the wood belonging to a wooden construction covered with reed was destroyed by fire. The variety of ground plans at the Maurya level may point to variations in the construction of habitats within a single site and to the growing complexity in its cultural pattern.

PERIOD II

The Cultural Assemblage

Northern Black Polished Ware

In the upper Ganga basin the major excavated sites yielding the NBP ware are Hastinapur, Alamgirpur, Purana Qila, Mathurā, Khalaua, Atranjikhera, Ahichchatra, Kanauj, Kausāmbi, Śrāvasti, Ayodhya, Sohagaura, Rajghat, Sarai Mohana, Prahaladpur and others. The stratigraphic position of the NBP ware and

1. Ibid, 1974-77.
2. Ibid, 1974-75, p.53
3. Ibid, 1975-76, p.54
4. The houses were built with thick walls.
5. H. Hartel, “Some Results of the Excavations at Sonkh”, p.72, fig. 3.
its associated shapes vary from region to region and site to site. Of these sites Hastinapur, Atranjikhera, Śrāvasti and Prahladpur are considered type sites.

The appearance of the NBP ware takes place in four different contexts as given below:

1. At some western sites, NBP ware phase comes stratigraphically after the PGW phase with a break in between the two, with the result that the two represent two different cultural horizons. The type site is Hastinapur.

2. At certain sites NBP overlaps with the PGW assemblage but the earlier independent PGW horizon is absent. The type site is Śrāvasti.

3. At a few sites, it appears in both contexts referred to in period 1 & 2. Here NBP ware is preceded by PGW phase in an independent cultural horizon and thereafter overlaps with the PGW assemblage and finally continues as an independent phase, the difference being that there is no perceptible gap between the two as is found in one. This type site is represented by Mathurā and Atranjikhera.

4. Lastly, at a few other sites of the eastern region of which Prahladpur is considered as the type site, NBP ware phase is preceded by Black and Red ware phase (layers 5 & 6) without any perceptible gap. At such sites PGW is conspicuous by its absence, but in this phase, most of the cultural traits are found in common with those of the independent PGW of western region as found in Prahladpur sub period 1A. In the later deposits (layer 3 & 4) which yields NBP ware, some of the earlier traits also continue in a diminishing order and lastly in sub period 1C, NBP ware continues in a new cultural horizon.

Thus stratigraphic testimony gleaned from several type sites indicate the

1 M.D.N. Sahi, “Stratigraphic Position of the NBP Ware in the Upper Ganga Basin and its Date”, Purattatva, no.7, p. 91-94.
2 See Mathurā Excavation Reports in JAR, 1974-77.
3 H.Harte, Excavations at Sonkh, p.25.
existence of NBP ware in two cultural horizons. Of these the earlier is accompanied by traits of the preceding period, while the later shows association with new traits. At Mathurā¹, the NBP ware makes its appearance in the beginning of the Mauryan period. At Sonkh² quite a number of mostly very small sherds have been found. From the rim, the shape of the vessels can at least be partially reconstructed. All available sherds belong to shallow bowls and dishes, most of them rather large, with flat or convex bottom and angular nearly straight, inclined wall with lain rim, which obviously retain elements of the PGW. The paste is of very fine fabric and of grey buff or reddish colour. A typical feature is a thin light red or pink layer beneath the coating. The coating itself is black, dark steel blue, or dark brown. It is lustrous and iridescent. Considering the extreme thinness of the sherds in relation to the size of the dishes one can rightfully call this ware the luxury ware of the Mauryan period.

The earlier period (i.e. Phase A) is characterised by the continuation of the PGW, in diminishing proportions along with its shape and pottery complex in the western region and by the continuation of Black and Red Ware traditions and shapes in the eastern region. In this phase the NBP phase is found in richer variety. The NBP Ware, the deluxe ceramic of this period, was produced locally in Mathurā. Certain new shapes like flat-based bowls etc. were introduced. This phase is marked by the presence of punch marked coins and structures of either mud brick or baked bricks. This phase is represented by Mathurā IB, Atranjikhera IV A, Śrāvasti I and Prahladpur IB, and is absent in Hastinapur, probably covered by the gap between period II and III³.

Phase B of the later period is characterised by the absence of PGW and BRW, greater use of coarse grey ware and emergence of some new shapes like carinated handi. In this phase the NBP occurs in lesser frequency and is generally thicker in fabric. It is in this Phase that the punch marked coins and brick structures are

¹ IAR. 1974-77.
² H. Hartel, Excavations at Sonkh, p.25.
³ M.C. Joshi, "Mathurā as an Ancient Settlement", p.168.
found at Mathurā\(^1\) and Sonkh\(^2\).

There are certain literary evidences which indicate that the NBP ware and the carinated handi were already in use during the life time of Buddha\(^3\). Yuang-Chuang’s\(^4\) account, though comparatively late, preserve certain tradition which can be traced upto Buddha’s time. These descriptions indicate that probably Buddha’s alms’ bowl was of NBP ware since it is the only ware which satisfies most of these descriptions\(^5\).

**THE ASSOCIATED CERAMIC WARES**

The associated ceramic wares in period II were coarse Grey ware, Black Slipped ware, Grey ware and ordinary Red ware, both at Mathurā\(^6\) and at Sonkh\(^7\). At Mathurā, plain Grey ware becomes more frequent in this period. Notable pottery types of Mathurā included bowls, dishes, vases, basins, jars and some miniature bowls\(^8\). At Sonkh Red ware became more prominent during the fourth-third century B.C. Storage jars, pyriformed or gourd shaped water jars and cooking vessels with lenticular base, the bottom of which contains mica in minute particles obviously to make the vessel fire proof become available\(^9\). Small bowl and dishes of a peculiar type in Grey, Black Slipped Grey or Red have been

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1. *IAR*, 1974-75, p.55
3. T.W.Rhys Davids and Herman Oldenburg (trans.) *Vinaya Texts*, Sacred Books of the East, Oxford,1885, Vol. XX, pp.66-90. The description he gives of Buddha’s bowl of Peshawar which was object of worship there is, “it holds two pecks and is of several colours, chiefly black. It is almost \(\frac{1}{5}\)th of an inch thick, of transparent brilliance and of glossy lusture”.
4. Thomas Walter *On Yuang Chuang’s Travels in India* (AD 629-645 ), reprint, Delhi ,1961, pp.130-131 ; he talks of Buddha denouncing old golden or other costlier bowls offered to him to hold his food and accepted a bowl of dark violet colour, bright and lustrous ,which he accepted from Devaraja. This tradition can be traced back to a similar tradition contained in the *Chullavagga* (1.4.4 ).
5. M.D.N.Sahi, “Stratigraphical Position of NBP Ware in Upper Ganga Basin and its Date”, p.94
found\textsuperscript{1}. Another pottery type of the third century BC is a carinated dish with slightly convex base, containing mica and an inverted rim. This type of ceramic ware can be traced to second century BC. Some illustrious innovations of the Mauryan pottery are the existence of animal shaped and figuratively adorned vessels in the third century BC\textsuperscript{2}. A fragment of tortoise shaped vessel in red clay decorated with incised grooves was probably used as a lamp\textsuperscript{3}.

OTHER TERRACOTTA OBJECTS

In the levels of the Mauryan period at Mathurā were found conventional and stylised animals and bird figurines in red colour, a painted broken figure of an elephant, with a lustrous slip following the NBP tradition. This object was most likely imported at Mathurā from the epicentre of NBP in other parts of Madhyadesh or Magadha. It would not be out of context to refer Upalisutta\textsuperscript{4} forming a part of early Pali literature in this regard which specially mentions the terracotta figurine with slop and burnish colored exterior\textsuperscript{5}. The find spot is Dhulkot habitational area (MTR-7)\textsuperscript{6}. A greater number of figurines belonging to period II which are generally grey in colour bear punched stamped and applique decoration and in some cases mark a black slip too. Mother goddess figurines are of two types - (a) simple and archaic type probably imported from north western region, (b) elaborate type (indigenous). The find spots are Ambarish Tila, (MTR-8) and Dhulkot area (MTR-7)\textsuperscript{7}. The terracotta art represents monkey figurines, birds etc\textsuperscript{8}. Amongst other animal figurines there is a rare representation of a Vrsā

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\textsuperscript{1} Ibid.
\textsuperscript{2} Ibid.
\textsuperscript{3} Ibid
\textsuperscript{5} Ibid.
\textsuperscript{6} \textit{IAR}, 1974-75, p.50.
\textsuperscript{7} M.C.Joshi and C.Margabandhu, “Some Terracottas from the Recent Excavations at Mathurā”, p.21.
\textsuperscript{8} Ibid.
vyala bearing the head of a bull and the body of snake or fish\(^1\). Besides there is a toy bull. A spirited animal figurine is represented in the toy ram with twisted horns, decorated face and body.\(^2\) All these were found in excavations at Dhulkot habitational area\(^3\).

At Sonkh there is a grey coloured black slipped head of a male terracotta from level 36 to 35. This item is important for 3 reasons:

1. Its definite location allows an archaeological dating in the transitional phase between the pre-Mauryan and the early Mauryan period, i.e. in the second half of the fourth century BC. There is no other terracotta piece of this period that can dated with equal accuracy.

2. The head is formed in the hitherto known style; indeed the pointed nose face and the two braids of hair falling down on the forehead remind us of the beak type, but the chignon possibly covered by clothes and tied on the left side as well as the region of the eyes and beard gives evidence of a developed craftsmanship.

3. The head is that of a male whereas most of the known Mauryan terracottas are, with a few exceptions, Mārkā figures\(^4\).

Apart from these, a number of terracotta items viz. fragments of terracotta votive tanks, wheels, discs, spindle whorls, skin rubbers, reels, game pieces, plain and decorated balls, bangles, jewellery moulds have been found in excavations at Sonkh\(^5\).

**Iron**

The earlier phase of PGW period did not have iron, as can be inferred

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\(^1\) Ibid, p.22.

\(^2\) Ibid, p.23.

\(^3\) *IAR*, 1974-75, p.50

\(^4\) H.Hartel, “Some Results of the Excavations at Sonkh”, p.86.

from the excavations\(^1\). PGW-iron period was primarily an age of iron weapons and not of iron tools. Since the upper Gangetic basin does not have any rich iron mines, the number of artifacts was limited. From Ambarish Tila in period Ib, a few iron implements were recovered in the excavation\(^2\). During this period iron could not have been a metal of common use because of two major limitations. The rich sources of iron in South Bihar were unknown to the people of Upper Gangetic and Sutlej basins. People probably used iron ores of Mandi in Himachal Pradesh, Patiala in Punjab and Kumaon Hills in Uttar Pradesh. It is held that these deposits are not rich enough and located in inaccessible areas\(^3\). It seems that even the weapons were in limited number and in sole possession of chiefs and rulers.

Iron became much more prolific and acquired a position of a common metal in the late phase of NBP i.e. period than the preceding phases of the PGW and early phase of NBP (Mathurā Pd. II and III, and Sonkh Phase II onwards)\(^4\). But the details of the objects are not available.

**COINS:**

The presence of punch marked coins in period II at Mathurā and at Sonkh confirms the circulation of punch marked coins in Mathurā and its environs. In the excavations at MTR - 9, northern extension of Katra mound, a square punch marked coin of copper has been recovered\(^5\). Silver and copper coins have been found at the excavations at Sonkh\(^6\). Along with punch marked coins, uninscribed cast coins and die-struck coins\(^7\) have also been found. A copper coin in damaged stage has been found at Katra\(^8\). It may be noted here that along with punch

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\(^1\) See Mathurā Excavations reports, \(IAR\), 1974-77.
\(^2\) \(IAR\), 1975-76, p.55.
\(^3\) H.C. Bharadwaj, *Aspects of Ancient Indian Technology*, Delhi, 1974, p.154
\(^4\) See Mathurā excavation reports, \(IAR\), 1974-77; and H.Hartel, *Excavations at Sonkh*, p.17
\(^5\) \(IAR\), 1975-76, p.55.
\(^7\) Ibid.
\(^8\) \(IAR\), 1976-77, p.56.
marked coins there also circulated uninscribed cast coins right from almost the beginning of monetary history of India\(^1\). At Sonkh, Levels 34 and 33 which belonged to the period of the Mauryas, yielded silver punch marked coins and uninscribed cast coins with crescent on hill motif on the reverse\(^2\).

**SEMI-PRECIOUS STONES**

Beads of topaz, amethyst and other semi-precious stones have been found at Mathurā\(^3\). Beads of semi precious stones except lapiz lazuli have been found at Sonkh\(^4\).

**OTHER OBJECTS:**

A square seal of shell, reading *Indrayāsa* in Brahmi letters\(^5\), beads of ivory\(^6\), bone points\(^7\) etc. have been found at Mathurā. At Sonkh, stone querns, balls, anthropomorphic bone figures etc. have been found\(^8\).

**COPPER:**

An unusual object of copper i.e. a trisula was found at Sonkh\(^9\). Apart from this numerous copper coins have been found in the excavations. Bracelets of copper are reported from excavations\(^10\).

\(^2\) H.Hartel, “Some Results of the Excavations at Sonkh”, p.79
\(^3\) *IAR*, 1973-74, p.32.
\(^5\) *IAR*, 1975-76, p.55.
\(^7\) Ibid
\(^8\) Ibid
\(^9\) Originally it was a needle 8.6 cms long, branched out in seven prongs. On either side of the thick prong three bent wire spikes soldered. One of these is missing in the excavated specimen. Probably it represents the oldest form of Trisula in Indian art. The piece was found within level 35 and is therefore dated, the end of fourth century BC: H. Hartel, *Excavations at Sonkh*, p.17.
\(^10\) H.Hartel, “Some results in the Excavations at Sonkh”, p.86, fig. 23.
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Conclusion:

The sites of Katra\(^1\), Kankali Tila\(^2\), Arin\(^3\), Sanketban\(^4\), Sonkh\(^5\) and some sites within the present city, continued from the preceding period while those of Chatta and Sankhitara were abundant. Possibly because of settlement in new areas or qualitative increase in the size of settlements, there are indications that both these changes took place. An increase in size can be seen at the site of Katra\(^6\) to the north of the site of Katra, the Chamunda mound was occupied\(^7\). Saptarshi Tila, Bhutesar, Govindnagar were occupied in this period\(^8\), Literary sources too mention that the towns of Methora and Cleisobara between which flowed the river Jomanæ\(^9\). The town of Methora can probably be identified with the site at Katra, that of Cleisobara has been variously identified\(^10\), but the most likely identification is with the site of Mahaban to the east of river Yamuna\(^11\).

Period III (second century BC to first century BC):

Settlement Pattern

Mathurā Complex: In this period the settlement which was as large as the habitation of the preceding period, continued to flourish within the mud fortification, although the massive defence wall (mud-Prākarā) did not function

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\(^1\) JAR, 1975-76, p.54-55.

\(^2\) Ibid.

\(^3\) Ibid, 1966-76,p. 54-55.

\(^4\) Ibid.


\(^6\) Ibid, 1975-76,p. 53-54

\(^7\) Ibid, 1973-74,p.32


\(^9\) J.W.McCrindle, Ancient India as described by Megasthenes and Arrian. London,1887, p.139.


as a defensive or protective enclosure for the occupants. This inference is drawn on the basis of deposit of period III in a trench across the fortification showing a layer of loose earth and ash superimposed by a structure of mud and baked bricks, right over the mud defence wall of period II.

The structural remains, mostly available on plain, were built of both mud and baked and unbaked bricks. The early levels of period III showed structural activity in mud medium represented by mud platforms and rammed floors, in some cases finished with the layer of crushed baked bricks. It was only towards the end of this period that baked bricks were popularly used in the construction, pre-dominating over the mud. MTR-13, i.e. Kankali Tila is marked by the remains of mud floor, surkhi, brick-bats and bricks. It was only in the middle and the upper layer of this period that baked bricks sized 40/39X24X5 cms at Kankali Tila began to be used for construction. The significant structures of this period at Kankali Tila were the lime-plastered brick floors and a complex of twelve mud blocks (platforms) of varying sizes, containing in one case two damaged storage jars in situ. A mud platform complex appears to have been planned as some kind of public communal building. A lime-plastered floor with storage jars and mud platform complex appear to have been a granary which is a noteworthy find. Two longish ovens and a ring well associated with the upper levels of this period also unearthed. Other interesting remains are the courtyards paved with brickbats and bricks with border of brick on edge, superimposing floors of compact mud.

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1 M.C. Joshi, “Mathurā as an Ancient Settlement”, p.168
2 *JAR.*, 1974-75, p.49
3 Ibid, 1975-76, p.54
7 Ibid, 1976-77, p.55
8 Ibid, p.54.
9 Ibid.
Sonkh Complex:

At Sonkh, construction activity continued without a break. At level 29, mud bricks measuring 40 x 28 centimeters were used for construction. At level 28, burnt bricks of the same size came into existence, specially for construction of drains and wells. The excavated structural remains of level 27 give testimony of an imaginative method of construction, changing in the layout of the ground plans from unit to unit. The building principle is clear: at first separate houses of two rooms were erected. These houses were built on various ground plans and often divided into groups\(^1\). Houses of each groups were adjusted to one another according to the availability of space and were connected with one another by enclosing walls. Such enclosed plots of land with buildings erected on them followed one another in a row and bordered on two sides by streets\(^2\). For the flooring pillars walls and pavements, baked bricks were used. In one of the rooms at Sonkh a fire place built of baked bricks with clay lining was found. The residential unit was clearly separated from the court complex\(^3\). There is a passage between them. The court complex has two stages (1) Outer (2) Inner. The Inner court is enclosed on all four sides. Such a structural design well facilitates a gradual transition from public to private area, and it also allows the division of a building complex into different traits. Some of the houses of level 27 show a special kind of arrangement. They have a water room with a deep well made of terracotta rings. It is remarkable that the well is always placed into the west room of the house, showing thereby a similarity with later constructions, in which water jars were found placed in south west chamber\(^4\). The houses were furnished with gable roofs and covered with roof tiles. The size of the tile was 33 cms. x 22 cms\(^5\).

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\(^1\) H.Hartel , "Some results of Excavations at Sonkh", p.72, also see fig. no. 2 for a view of excavated area of level 27 & fig. 3 for ground plan of two houses in level 27.

\(^2\) Ibid.

\(^3\) Ibid, p.73.

\(^4\) Ibid, p.78.

\(^5\) Ibid, p.74.
Fig. 2: Excavated area of level 27.
Source: H. Hartel, *Excavations at Sonkh.*
Fig. 3: Ground-Plan of 2 houses in level 27.  
Source: H. Hartel, *Excavations at Sonkh.*
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As roofing of houses joining each other in a right angle was apparently difficult to cope with, rectangular groups of rooms were built and attention was given to adequate spacing so as to allow sufficient projection for the slanting roof.

This method was also followed in levels 26 and 25. The level groups 27 to 25 were considered as a unit on the grounds of building technique. These levels have been dated in the first three quarters of first century BC.

Period III: Cultural Assemblages

This period witnessed the last phase of ring wells, NBP ware (deluxe pottery) of the preceding age and of the Grey Ware, and prolific use of utilitarian Red Ware with simple preliminary designs. Some of the pots had single stamped motif as preliminary design. Among the notable finds in Ambarish Tila (MTR-8) consists of (a) terracotta plaques with female figurines, (b) a male lute player. With regard to the terracotta figurines, the trends observed include limited continuation of a few of the earlier types for some time, modification and adaptation of some artistic traits of the previous period and emergence of new elements, besides greater finish and refinement. Further, in this duration of time, terracotta art attained a uniformity in north India and as a result of greater cultural interaction, examples of aesthetic ideals, conceptions and treatment of human figurines can be seen in the contemporary image in terracotta and stone.

From level 27 in Sonkh, comes a small terracotta hand, the design on it looks tantrick. Carved ring stones were found from the same level. The frontal part of

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1 Ibid.
2 Ibid.
3 *JAR*, 1975-76, p.54.
4 M.C. Joshi and C. Margabandhu, “Some Terracotta from recent Excavations at Mathurā—A study”, p.23.
8 Ibid.
lion was found embedded on the floor\(^1\), a frontal view of bullock cart was also found\(^2\). A large number of votive tanks, more or less fragmentary, were found at Sonkh\(^3\). Three of them were approximately of the first century BC, i.e. level 26 to level 23. The stylistic features of Mātrkā figures confirm to basic type of the mother goddess as found in several specimens in level 23 at Sonkh\(^4\). They are solid single terracottas of sitting Mātrkās with a child in the left arm\(^5\). The other finds of this period are a few copper cast coins\(^6\). Inscribed copper coins of Gomitra, Brahmamitra and Vishnumitra were found\(^7\). A spearhead, sickle, ring of iron, hook, tangle of iron, antimony rod and wheel of copper, bracelet and bangle of glass have been found from Sonkh\(^8\). Bone stylus and shell bangles have also been recovered from the excavations at Sonkh. Stone objects, rectangular quern plates, pestles, dabbers, discs, balls, stone caskets etc. have been found\(^9\). Also, the beads of all types except lapiz lazuli have been found. These beads are neither etched nor incised\(^10\). The artifacts found at Mathura and Sonkh excavations indicate delicate workmanship and refined taste of the people compared to the earlier period.

**Period IV (100 AD – 300 AD)**

**Settlement Pattern**

**Mathura Complex**:

Evidence of major structural activities of this period\(^1^1\) is available in the form of:

(I) Revival of original Dhulkot defences of period II and construction of

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1. H.Hartel, "Some Results of the Excavations at Sonkh", p.89.
2. Ibid.
3. Ibid., fig.31.
4. Ibid., p. 89.
6. Ibid., p.17.
7. Ibid.
8. Ibid.
9. Ibid.
10. Ibid.
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der inner fortification wall.

(II) Construction of a huge tank complex at Kankali Tila,

(III) Remains of walls in mud and baked bricks, mud floors with oven and drain built of baked bricks.

A significant development of this period was revival and enlargement of mud fortifications around the city. Excavations show that the Dhulkot fortification within which were located the Katra and other mounds enclosed in an area of three square kilometers adjacent to the river Yamuna\(^1\). In addition an inner fortification with possibly semi-circular bastions and the moat on at least the western and north-western side was also built. The width and the height of the retaining wall varied from 22 cms to 40 cms and 80 cms, respectively. Its remains were located in the northern area of Katra mound (MTR-9)\(^2\). Built on mud, it was externally strengthened by a short retaining wall of broken over burnt bricks, tiles, clay lumps, etc. and originally had a considerable height\(^3\). It was not possible to know the exact plan or the area covered by it. Keeping in view the joining points of its northern and western walls, which were marked by a circular bastion, it can be guessed that the inner fortification had roughly quadrilateral shape around the central part of the city. It is not unlikely that an idea of a fort within a fortification with a circular bastion may have been introduced under north-western impact.

At Kankali Tila a tank complex was exposed showing four phases of construction. It was made of baked bricks of various sizes (40x25x5 cms, 30x26x4 cms, 30x17x5 cms.) The tank is dug into natural soil to a depth of 3.96 meters. On a rectangular plan, it has a ramp on the eastern side with an irregular (oblong) ancillary compartment along its northern and southern sides. On top of the north wall of the tank, a stone channel (pranāla) was provided as an inlet for

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\(^1\) *IAR*, 1975-76, p.55.
\(^2\) Ibid.
\(^3\) B.K. Thapar, *Recent Archaeological Discoveries in India*, p.139
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filling it up with water. Near the outer end of the ramp, leading to the tank, was exposed a well which had become sealed up as a result of the extension of the passage attached to the ramp. The first constructional phase of the tank could be ascribed to the first half of the first century A.D. At Mathurā, flooring was made of brick mixed with concrete lime. This indicates the use of *surkhi* which contributed to the stability of structures. Further, we have evidence of baked tiles for roofing in Mathurā. These innovations added to the solidity and longevity of urban structures in the early centuries of Christian era.

**Sonkh Complex:**

Increase in population in the Mathurā region is suggested by structural remains unearthed at levels 27 and 25 and further at 24 and 23 at Sonkh datable to Pre-Kuśāna-Ksatrapa age. In comparison to the older ground plans, the houses are irregularly placed and as a result the streets became more crooked than in previous periods. One of the possible reasons for irregular arrangement of house sites might have been due to lack of enough space and increase of demand on land by the growing population in the settlement. Another interesting architectural feature was the use of the oldest phase of habitation at level 23, of stone, in projected sections of buildings at street corners probably to ensure against damages by vehicles (bullock carts). It may be assumed that movement of traffic and people and materials might have increased in this period.

A complete house site contains in its southwest corner a combined bathroom and a toilet i.e. a luxury unknown in the later constructions. Bricks used for construction measure between 40x25x5 cms and 40x26x6 cms. Proper drainage system existed for removing water from the bathroom. There existed the luxury water jars in the bathroom. Hartel presumed that one jar was for cold and another

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2. Ibid, 1974-75, p.32
3. Ibid.
5. Ibid, P.75.
one was for hot water. It was a mica (mixed in clay) vessel with burnt bottom\(^1\).

During the Kuśāna period the population of the area of Sonkh further increased. Seven levels of deposit belonging to the Kuśāna times at Sonkh show a more or less densely built up area\(^2\). Occasionally, there is a working area without any structure or an open space joined by several streets and lanes. Houses of levels 21 to 16 are made of bricks having the size of 37x23x5 cms\(^3\). The essential features of the buildings are the residential houses with bathrooms\(^4\). The streets are lined with shops\(^5\). The existence of a shop is significant indicator of commercial activities taking central place in the Kuśāna age. The comfort and stability were greater in older buildings than those in levels 21 to 16 which give an appearance of uniformity by the use of bricks of equal size and a proper ground plan. Compared to the construction of level 21 with that of the younger level 16, the more spacious arrangement of structures within the same area became conspicuous in the older habitation\(^6\). The ground plan of level 16 shows the most developed and the most systematic layout. What is remarkable here is that the single houses come to be built more closely together leaving a narrow gap of about 30 cms. from one house wall to another\(^7\).

At Sonkh,\(^8\) a huge building structure has been discovered in the stratigraphic context of the Kuśāna period i.e. Apsidal temple no.1 in the habitational area, Hartel describes it as the"first Hinduistic Kuśāna brick temple" in the Mathurā district. This building is situated in the centre of the successive settlements of the city. Seven constructional phases have been ascribed to this building:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Level 21</th>
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\(^1\) Ibid, p.78.  
\(^2\) Ibid, p.75, also see fig. 4 for ground plan of houses in level 23.  
\(^3\) Ibid, Level 22 to 16 are to be placed collectively.  
\(^4\) Ibid.  
\(^5\) Ibid, p.75.  
\(^6\) Ibid.  
\(^7\) Ibid, also see fig. 5 for ground plan of houses in level 21.  
\(^8\) Ibid, p.76.
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Super structure of

phase I = Levels 20 and 19,
Phase II = Level 18,
Phases III and IV = Level 17,
Phases V and VI = Level 16,
Phase VII = Level 15.

At least two building phases may be lying underground as is indicated by a few temporarily exposed wall remains running radially towards the apse, possibly leading to a shrine of rectangular shape\textsuperscript{1}. This temple possibly contained a regular altar niche or a round altar niche\textsuperscript{2}.

Cultural assemblages:

Pottery:

The pottery from the second half of the first century BC to the end of the third century AD is rightly labeled as Kusāṇa pottery. The principal pottery of the period was represented by bright and dull Red Ware of fine medium and coarse fabric\textsuperscript{3}. The most characteristic feature of the Kusāṇa pottery is stamping of the storage vessel jars with symbolic, floral and geometric designs. The ceramic industry of this period of Mathurā is characterized by the presence of sprinklers, basins, bowls, votive tanks, jars with plain and decorated spouts, a stamped amphora handle decked with a female figure, and pots with stamped designs. The designs consists of traditional auspicious symbols such as triratnas, Śrīvatsas, sankhas, fish, swan, floral motifs, circles, spirals etc\textsuperscript{4}.

At Sonkh too, different forms such as Śrīvatsa, nandyavarta, purṛa-ghata, cakra, Svastikā, hanṣa, rosette, leaf, circle etc. turn up as decorative patterns\textsuperscript{5}. The

\textsuperscript{1} Ibid, p.77
\textsuperscript{2} Ibid.
\textsuperscript{3} JAR, 1973-74, p.34.
\textsuperscript{4} B.K.Thapar, Recent Archaeological Discoveries in India, p.140; M.C.Joshi shows similarity between the pottery of Mathurā and the pottery of Rangamahal, JAR, 1973-74 , p.31.
\textsuperscript{5} H.Hartel, Pottery at Mathurā, fig.20.8,p.185
Fig. 4: Ground-Plan of some houses in level 23.
Source: H. Hartel, *Excavations at Sonkh.*
Fig. 5: Ground-Plan of structure in southern excavated area. Source: H. Hartel, *Excavations at Sonkh.*
Kṣatrapa Red Ware is characterized by definite differences in shape like globular water jar, small goblet, beaker etc. At the end of this period the fashion of stamping the vessel begins. The Kuṣāṇa Red Ware in the levels 16-22 was represented by storage vessels and jars with Kuṣāṇa stamping. The globular water jars with corrugated rim or neck are now very often spouted, the spout sometimes being shaped as head of a makara or a horse, bull, or a bird.

There are few types of bowl lids found at Sonkh:

(a) bowl lids with central grip hole,

(b) majority are bowl lids with central knob,

(c) shallow bell shaped lid with pointed knob and incised and indented decoration.

The votive tanks of the Kuṣāṇa period are wheel thrown with flat base and prifiled rim, sometimes with aquatic animals like a cobra or a fish depicted on the bottom of the inside and with birds and lamp cups on the rim. The glazed Kuṣāṇa pottery has blue-greenish copper glaze, originally shining and semi transparent, now corroded and opaque. This glaze is based on lead with copper and iron combinations as colouring agents.

**Associated objects:**

1. Seals and sealings: In this period seals with legend Vijayaśivagrāmarddhah has been discovered from Katra. Other noteworthy finds from Katra are seals and sealings with legend Bhutapāla-sa-gāṁāsa and Mahārājā Tra (?)maha respectively. Inscribed seals have also been discovered from the Kṣatrapa level.

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2 Ibid.
3 H.Hartel, "Pottery at Mathurā", fig.20.7 no.6, p.186.
4 Ibid, fig.20.7, no.8, no.9 respectively.
5 Ibid, fig.20.4, no.2, p.187.
6 Ibid, p.17
7 *IAR*, 1973-74,p.31.
8 Ibid, 1975-76,p.54
at Sonkh\textsuperscript{1}. A inscribed seal is discovered bearing two lines of inscription. The reading runs \textit{Anangabala}\textsuperscript{2}.

2. Stamps: A terracotta stamp engraved with a stylised peacock and an ivory stand\textsuperscript{3} have been discovered at Mathurā.

3. Terracotta figurines and other materials: Several human and animal terracotta figurines prepared out of a single mould or a double mould including a Yakṣi in Mathurā art tradition have been discovered\textsuperscript{4}. Other terracotta figures from Mathurā include Vamanaka (dwarf), a Śaka-Kuśāṇa soldier, a princely male, Bodhisattva, Maitreya and Gaja Lakṣmi have also been found\textsuperscript{5}. At Sonkh, the Kuśāṇa level produced an abundance of terracotta figurines of various divinities, pre-dominantly those of Kubera and Durga-Mahiṣāsurāmardinī\textsuperscript{6}. The plaque of Durga-Mahiṣāsurāmardinī hails from the Kuśāṇa levels \textit{i.e.} from the time of Vāsudeva I and depicts Durga in her Mahiṣāsurāmardinī aspect\textsuperscript{7}. Another hollow plaque, fragmentary but interesting in its composition, shows that the potters of those days did not produce pots only. This piece is moulded out of thin clay and could be worn on a string or a chain as a pendant. On the rim, besides the hanging device, there is a small hole through which probably globules or pebbles were inserted for the object to serve as a rattle. The reverse side shows a lotus decoration. On the obverse, figures of whistling man, men in dancing and singing postures are shown\textsuperscript{8}. A terracotta rattle bearing māngaiya lanchcharas, skin rubbers, animal headed gemsmen, spindle whorls etc. were found from Mathurā\textsuperscript{9}.

\textsuperscript{1}H.Hartel, \textit{Excavations at Sonkh}, p.17 & 453.
\textsuperscript{2}Ibid, “Some Results At the Excavations at Sonkh”, p.90, fig.20.
\textsuperscript{3}IAR, 1975-76,p.54.
\textsuperscript{4}B.K.Thaper, \textit{Recent Archaeological Discoveries in India}, p.139.
\textsuperscript{5}Ibid, p.140.
\textsuperscript{6}H.Hartel, “Some Results of the Excavations at Sonkh”, p.92, fig. 36.
\textsuperscript{7}Ibid.
\textsuperscript{8}Ibid, p.91, fig.35.
\textsuperscript{9}IAR , 1974-75, p.48-50
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Stone sculptures and objects:
Numerous stone sculptures have been found during explorations at mounds in Mathurā and they mostly date to the Šaka-Kuśāṇa period. Stone sculptures depicting scenes from the life of Buddha, a Buddha image, a head of a royal figure with several tiny Buddha figures on the crown, a head with a moustache and curly hair (Kubera), forepart of a *salabhanjika* figure (a figure of a woman leaning against a tree) etc. have been found in excavations\(^1\). The stone objects discovered from Sonkh\(^2\) are mortars, ring stones, dabbers, pestles, caskets inscribed fragments etc. in the context of the Kuśāṇa period.

Other Objects:
Other important items such as an ivory comb, ivory and shell bangles, bone points, beads of semi-precious stones etc. found from Mathurā\(^3\). Ivory stand, Bone stylus, shell bangles, beads of all materials have also been discovered from Sonkh\(^4\).

Metal Objects:
**Iron:** Arrowheads, spearheads, knives, chains, rods, clamps, spoons and ladle of iron have been discovered from Sonkh\(^5\).

**Copper:** A bowl of copper has been found in excavation at Sonkh\(^6\).

**Bronze:** A bronze figure, of 10.6 cms height and 8.5 cms width has been discovered from Sonkh\(^7\). This object is flatly cast and Hartel finds it of great significance in three respects\(^8\):

\(^1\) B.K. Thaper, *Recent Archaeological Discoveries in India*, p.140; for general picture of Mathurā sculptures see J. Ph. Vogel, *Catalogue of Archaeological Museum at Mathurā*.


\(^3\) *IAR*, 1974-75, p.48-50.


\(^5\) Ibid, p.17.

\(^6\) Ibid.

\(^7\) H. Hartel, “Some Results of the Excavations at Sonkh”, p.90, fig, 33.

\(^8\) Ibid.
1. It is first Kuṣāṇa bronze known to us from Mathurā area (i.e. Sonkh).

2. It is of great iconographic interest.

3. Probably it is the oldest Hinduistic bronze so far found in India.

Two figures, one probably representing mother goddess and the other Skanda have been found in house C, of level 16. These figures are on a metal pedestal surrounded by a decorative frame. This frame is apparently made up of columns and an architrave. The figures are connected with one another as well as with the frame by small bars. Probably it was used for puja. Hartel suggests that bronze of this type and technique existed in Sonkh in Kaṇiśka's time. Another bronze figure is from level 21, 9.3 cms high and consisting of two fragments joined together. The lower part of the body was dressed in a dhoti. It has spear in his hand. The facial features, headdress, clothing and posture of the body are clearly of Kuṣāṇa style. This is probably the figure of Skanda. Though found at different levels both bronze figures are dated back to 100 AD.

Structures in Mathurā and Sonkh:

A Kuṣāṇa Structure: Mat Devakula

The Mat shrine was found after the flat mound known as Tokri tila at Mat was excavated in 1912. It was one of the most impressive and major religious buildings of Mathurā, situated nine miles north of Mathurā city. It was dated in the first and the second century AD. This was built of bricks. The main part of the edifice was a rectangle about 100 ft (18 m.) from north to south. At the north west end, some remains of a circular shrine, are seen. It appears to be part of the plinth, facing the east where remains of a flight of steps, leading to the plinth.
were found. Inside this structure and not far from the place where it originally stood, was discovered the lower part of the seated ‘Vima’ statue. The remaining statues of the kings or Kuśāṇa dignitaries were found not at their former place, but scattered in the south west part of the building. Outside to the south, were remnants of foundations, probably an enclosure, rectangular in shape which may have contained rows of dwelling rooms\(^1\) or of a Sabhā used for feeding the Brāhmaṇas and possibly alluded to in the Huviṣka inscription\(^2\). To the west of the plinth was a big tank (puskarini) referred to in the Wima inscription\(^3\). As it is built of large brick of exactly same size as those used in the plinth, it must be contemporary with the building. The inscription states that a temple along with a garden, a sabha and a gateway was constructed by a bakānapati Humaspala, during the reign of Mahārājā Rajātirājā devapatra śahi Vema\(^4\). Both the inscriptions call the structure a devakula. If it is a ‘house of gods’, as it is to be literally translated, who were the gods revered inside? If it is a gālary of former kings’ statues why it is so named? Probably it was a devakula or a temple where kings statues were given divine status. The polity of the Kuśāṇa s was based on the king’s divine associations\(^5\). Lüders suggests that the mentioning of the provisions for Brāhmaṇas shows that the devakula had nothing to do with the Buddhist religion\(^6\). In the inscriptions we have references to arāmas (gardens), puskariṇī (tank), udaparā (well) etc. These structures must have existed in the Śaka - Kuśāṇa period.

**Buddhist Structures:**

The scattered and mutilated remnants of the Buddhist sanctuaries now preserved in the Mathurā Museum, Lucknow Museum and Calcutta Museum, still convey some faint idea of their former splendour. They call to our imagination

\(^1\) Ibid, 1911/12, II, 11915, pp. 120-127  
\(^2\) H.Lüders, Mathurā Inscriptions, no.99, p.140  
\(^3\) Ibid, no.98, pp.134 -135.  
\(^4\) Ibid.  
\(^5\) See chapter III on Political History.  
\(^6\) H.Lüders, Mathurā Inscriptions, p145.
monuments of imposing dimensions covered with ornamental carvings and possessing numerous statues, some of gigantic size. It is not easy to form a more exact idea of appearances of the buildings, of the plan on which they were designed and of their architectural features. The decay of these buildings probably relate to the late Gupta and post Gupta phase in the history of Mathurā. The latest Buddhist inscriptions hitherto found at Mathurā belong to the Gupta period. It would therefore be reasonable to assume that the Hunas may have been responsible for the ruin of the Buddhist monuments at Mathurā.

Vihāras:

Buddhist Vihāras assumed the shape of the square block formed by four rows of cell built along the sides of an inner courtyard. Along the inner courtyard there was usually a varandah supported on pillars. It may be possible that the thirty pillar bases kept in the Mathurā Museum belong to such a building. From an inscription in one of them, it appears that it belongs to the Vihāra of Mahārājā Huviska. An architrave of a gateway (torāṇa), depicts on its obverse the scene of a refractory in a Vihāra where some monks have assembled for food. Several Vihāras have also been mentioned in the inscriptions of Mathurā.

Śtūpas:

We do not have the remains of the structures of Śtūpas of the Śaka-Kuśāṇa Mathurā, but epigraphic evidence suggests that Śtūpas must have been constructed in Mathurā. Śtūpas are solid structures of bricks or stones often of enormous size, consisting of a basement of one or more square terraces (medhi), approached by a flight of stairs (sopana), a circular drum and dome (anda) and a

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3 Epigraphia Indica, vol. IX, pp.141 & 146
4 J.Ph.Vogel, Catalogue of Archaeological Museum at Mathurā, M.M. no. N; pl. IV.
5 Ibid, J.10 & 11 (pl.xxii), M.M.no.N,10 & 11,this Stūpas was originally at Jamalpur mound.
cube (harmika) surrounded by a range of parasols (chhatravalis). These parasols (chhatravalis) were attached to a metal mast (yasti), on the top of which a rain vase (varṣa-sthala) was placed. The Stūpas were erected merely for the sake of merit. Stūpas of miniature size were given as votive offerings. We have depictions of Stūpa even in the Mauryan and the Śunga period architraves. We have the picture of the Buddhist Stūpa on either side and the garlanded tree to right and a mutilated torana figure with a female bust to left. Below is a carved railing and a row of bells (Ghanṭāvali) intervened with lotus buds suspended from an ornamental string. The reverse bears a railing and gates surmounted by arches. Several human figures occupy this architectural complex. Acquisition of an architrave from Katra proves the existence of a Buddhist Stūpa on that site at such an early date.

An inscription of the Śaka period mentions a Stūpa founded by a chief queen of a great satrap Rajula and a Guha Vihāra existing there at Katra.

We have a votive Stūpa in Mathurā Museum inscribed with a dedicatory inscription. It may convey some idea of the shape and the decoration of the monumental Stūpa of the Kuṣāṇa period, though the Stūpa model is not complete and it consists merely of a drum and a dome. We have pictures of complete Stūpas on the reverse of some railing pillars. We have two fragments of large stone parasols carved with concentric decorative borders. These may have belonged to the pentacles of Stūpas. At Dhruva Tila, the drum of a miniature Stūpa has been found. It is carved with eight scenes of Buddha’s life. This must have been used to decorate the Stūpa of a larger size.

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2 H. Lüders, Mathurā Inscriptions, no.38, p.54-55.
3 J. Ph. Vogel, Catalogue of Archaeological Museum at Mathurā, MM No. N, Plate-IV
4 Ibid, J. 10& 11 (Plate XXI), M.M. No. N, 10&11, This Stūpas was originally at Jamalpur Mound.
5 Ibid.
The Caubara mounds are undoubtedly the remnants of Buddhist Stūpas. Caubara mounds is a group of twelve circular mounds. In mound A were found bricks of a Stūpa and a steatite relic casket, in mound C a colossal head and the right knee of a seated colossal draped figure. These fragments evidently belong to a large Buddha statue. The mounds A and D were Buddhist Stūpas, C was certainly a site of a Buddhist sanctuary and mound B was also Buddhist as is proved by fragment of Buddha statue found there. It appears from the inscription\(^2\) that a Stūpa existed in the middle of the first century AD, during the reign of Huviska (yr.33) and it gives Madhuvāranaka as the name of the Stūpa (or locality). A votive Stūpa from Jamalpur carved with the figure of the Buddha seated in the abhayamudra facing four directions has been recovered. These are intervened by blank arches. The inscription on the top records Nusāpriyaye Surānāsyā dhitu, (i.e. gift of Nusāpriya, the daughter of Surānā). This sculpture belongs to the first century A.D. The shrine at Mora which flourished in the Kusāna period was circular in plan. There were also tiered structures with a Stūpa or semi-circular elements at the top.

On an Āyāgapata (tablet of homage)\(^3\) we find complete representation of a Stūpa with a staircase leading upto the terrace which is surrounded by a railing. At the top of the flight of steps we notice the gateway with its three architraves, similar in shape to those of Bharhut and Sanchi, though this Āyāgapata is not Buddhist but Jaina, as it appears from the inscription.

Period V( circa fourth century AD to circa sixth century AD):

The structural remains of period V show general decline of township in Mathurā region.

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Mathurā Complex: In Mathurā city at Ambarish Tila (MTR- 8) and Golpara (MTR-11) few floors of mud and brickbats have been reported from the archaeological excavations.¹

Sonkh Complex: At Sonkh, from level 15 up to the levels of medieval times, the mound of Sonkh presented a picture of destruction and decay, leaving fragments of unconnected walls. The ground plan was ascending from north to south, the height ranging between 23.20m. and 24.20 m. in north and 24.35 m. and 24.80 m. in the south. The habitation of house A, E and also of partly B continued. The remains of wall show that the southern tract of house A was still in use in level 15. The newly built north -western room and the courtyard were of poor quality due to the frequent use of the brick and brickbats and rubbles instead of compact bricks. Remains of the floor level of house B and small fragments of the walls of the southern row of rooms point to a further use of this tract, but nothing is left of the main courtyard. Fragments of new walls to the east and the northeast show that other structures were erected herein level 15. The same can be said of the western wall of house B. Nothing was left on the northern tract of the house.²

At the place of temple platform of level 16 new structures were erected, using partly the old wall remains of foundation. Remains of brick pavements outside the northern wall fragment make it clear that floor level around the structure lay at an average height ca.23.33 m. Groups of small structural remains have been discovered where formerly buildings C and G were situated. Nothing was left of the northern tract of the house F. Only walls and brick pavements and patches of mud floors have been discovered³.

¹ *IAR*, 1975-76, pp. 53-55.
³ Ibid.
Cultural Assemblages:

Pottery:

Pottery of Black slipped Ware with black horizontal stripes and black painted stripes have been found. Potteries of this period have floral patterns, swan and peacock designed on them. Moulded bowls with relief ornaments have been discovered in the excavations.¹

Terracotta Materials:

Fragment of terracotta relief with the depiction of Makara as vahana of goddess Ganga² and a worn fragment of moulded female figure perhaps representing the scene of a woman feeding a parrot with a fruit³ have been found in the excavation at Sonkh. Animal figurines one Makara, two elephants, eight horses seventeen humped bull figures a buffalo, a dog a cobra hood Lion figure etc. have been found at Sonkh in levels 15-14.⁴ Votives tanks and water jugs terracotta wheels discs, 8 spindle whorls, dabbers, reels, 3 games pieces have been found here.⁵

Metal objects:

Iron arrow heads, a rod, a tube, chisel, nail, curved hook, broken chain and a dumb bell shaped object have been found in the excavations at Sonkh.⁶

Conclusion

Archaeologically, excavations have indicated development of a township form a village around Ambarish Tila. The beginning of a rural settlement around the

¹ Ibid.
² Ibid, p.145.
³ Ibid.
⁴ Ibid,p.147.
⁵ Ibid.
⁶ Ibid, p.162
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Ambarish Tila is now archaeologically datable to a period ranging from 6th c. BC to the closing decades of 4th c. BC. This period is represented by the use of the PGW and also perhaps in the later phase of occupation by the Black Polished Pottery. Linear distances between the PGW sites in the Mathurā region suggest that both the spacing of and relationship between the settlements were random. This is confirmed by spacing of the sites in surrounding districts and confirms to the simple PGW economy.

Urbanization in Mathurā began with the commencement of NBP Ware phase, the date ranging from 4th c.BC-2nd c.BC. In the NBP period, the distances between the sites in Mathurā suggest a relatively uniform spacing. In the region between Mathurā and Noh, the average distance spacing between one side and its nearest neighbour is between 10 to 15 kms. This suggests a natural emergence of sites on a relatively isotropic surface.¹ Not much is known about these sites to determine their relationship, but the fortified city of Mathurā, located on the bank of the Yamuna was most important. Of those sites between which distances have been measured, only Noh and Sonkh have been excavated, and on the basis of excavations both seem to have been relatively important². However, more excavations are necessary before any conclusion can be reached about the significance of the relative importance of the sites and of the space between these distances. It is interesting that similar distance patterns have been noticed in the other NBP area i.e. in Allahabad district³.

In the Śunga- Kuśāna period the settlement pattern is more complex and is important not only regarding the relationships between settlements, but also to suggest the existence of certain sites in this period. We observe that Mathurā city had links with some important sites of its immediate neighbourhood. From a

² Ibid.
number of sculptures found, the site of the city waterworks, and the mounds of Bhutesar, Caubara, Chaurasi, Kankali Tila and Jamalpur were probably religious settlements. The sites of waterworks and of Caubara and Jamalpur were primarily Buddhist; that of Kankali Tila was predominantly Jain. Though we do not have direct reference about the monastic establishments of Mathurā, from the insessional evidences referring to traders and artisans at the sites of Kankali Tila we can suggest that at least some of these settlements around the periphery of the city were monastic, and that they were either visited by traders and artisans from the city area, or were themselves connected with trade and production.

In the tahsils of Mathurā and south Chatta, sites of Kota, Bajna, Ganesra, Giridharpur, Maholi, Naraholi and Jail mound are at four to five kilometer distance from each other. They form a semicircle with sites regularly placed along its circumference. The sites of Vrindavan, Chhatrika, Sakna, Mora, Naya Nagla, Jansuti, Usphar, Tarsi and possibly Azampur form a second semicircle and distances between these and the site of Katra vary between seven and a half to ten kilometres. Distances between the sites of the circle are unequal. The third semicircle consists of the sites of Chaumuhan, Ral, Jakhangaon, Aring, Bhadar, Jinga Nagla and Chargaon. Distances between Katra and these sites vary from thirteen to seventeen kilometres, and the distances spacing the sites of the circle are uneven.

In addition to the circular pattern several of the above sites were located along radial routes converging towards the city of Mathurā. The routes cut across the three circles in straight lines. The routes traced by Roshan Dalal are:

1. Chaumuhan (third circle) - Chhatikra (second circle) - Kota (first circle) - Katra.

2. Aring (third circle) - Ashgarpur (between second and first circle) - Katra.

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1 See the list of occupations in chapter V.
2 Rosan Dalal, "The Historical Geography of Mathurā Region", p.7.
3 Ibid., p.8
3. Bhader (third circle)-Uchagaon and Usphar (second circle)-Palikhera (first circle)-Katra.


The first circle is so geometric and the spacing of the sites so even that it suggests a planned location, i.e. these sites were chosen and developed for a specific purpose at optimum distance from the city of Mathurā, or else these sites and the sites at other circles emerged naturally to support Mathurā, as Mathurā was a complex religious centre and as the sects multiplied they might have settled at sites around the city. There are archaeological evidences, such as sculptures etc. which suggest that most of the sites of the first circle were religious settlements originating in the Śūnga period. But further excavation is required at all the sites of the circles and a detailed analysis of sects at all sites would be necessary to test this hypothesis.

In the Śūnga and the Śaka- Kuśāra period trade and the religion of Mathurā were the most important factors in the location of settlements in this period rather than topography and environment of the region.

For the assessment of the chronology of the cultural periods of ancient Mathurā it has to be remembered that its archaeological history has a gapless cultural continuity ever since the first settlement was founded here. Anyone who probes into the past from unknown to known direction taking into account various datable factors like epigraphs, coins, terracottas, plaques/figures, ring wells etc., there may not be any serious reservation in regard to the date of Period III or even of Period II. Period II almost had its beginning with the emergence of terracotta ring wells, representative pottery of the period being NBP Ware and associated ceramics. There is an overlap phase between period IB and period II containing PGW and only 17 sherds of NBP Ware distributed in about half a dozen layers.

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1 see J. Ph. Vogel, *Catalogue of the Archaeological Museum at Mathurā.*
Probably these limited specimens of NBP Ware could only be parts of imported pots to Mathurā from an area where they were originally produced i.e. the Eastern U.P. and Western Bihar\(^1\). It may be also mentioned in this connection that artifacts somewhat similar to the terracotta animal figurines of period IB and early levels of Period II of Mathurā were also found at Srāvasti\(^2\), where they have been placed in period I (600BC-400BC.) marked by the presence of NBP Ware, the origin of which is regarded by most scholars to be somewhere in 6\(^{th}\) century BC, in the mid-eastern India. Its transportation to Mathurā from eastern India might have taken considerable time in those days. Therefore IB is dated around 500 BC\(^3\). In respect of the date of period IA, the above mentioned considerations have to be taken into account, for the deposit of period IA is superimposed by that of period IB. Further in view of the occurrence of PGW together with a very limited quantity of Black Slipped Ware and Coarse Black and Red Ware, and evidence of only two structural levels in period IA, it is difficult to push back its antiquity much beyond 600 BC\(^4\). What is significant in this regard is that even at other PGW sites of neighbouring areas viz. Atranjikhera\(^5\), Bateshwar\(^6\), Khalua\(^7\), Jakhera\(^8\), Allahpur\(^9\), Noh\(^10\) and Jodhpura\(^11\), the quantity of Black Slipped and Black and Red Wares gets less and less and loses significance in the later date for the PGW deposits at Mathurā.

Excavations have shown that Dhulkot fortifications within which were located

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1 M.C.Joshi and A.K.Sinha, Chronology of Mathurā: an Assessment, p.43.
2 Ibid.
3 Ibid.
4 Ibid.
6 IAR, 1975-76.
7 Ibid, 1965-66.
11 Ibid, 1972-73
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Katra and other mounds enclosed an area of three square kilometers adjacent to the river Yamuna. This was the main city of Mathurā. Within the close proximity to this area are more than ninety sites where sculptures and inscriptions have been found. Some of these are from mounds just outside the fortification, others are from the localities within the city areas. These constitute the core area of Mathurā.

A Resume of Finds at Mathurā during Archaeological Excavations: 1973-77

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>SITE</th>
<th>FORTIFICATION</th>
<th>OTHER ANTIQUITIES</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pd. Ia 6th c. B.C.-6th c. B.C.</td>
<td>Ambarish Tila -MTR-8, Towards the Northern end of the present Mathurā—close to river Yamuna (Tiny village of Mathurā)</td>
<td>Characterised by 2 structural levels – the earlier represented by the floor with post holes and later by a partially extant and platforms.</td>
<td>Principal ceramics – PGW, Red Ware and some sherd of Black Polished Ware and a few sherd of BRW Ware of inferior quality, some Plain Grey Ware sherd.</td>
<td>IAR, 1975-76, p. 53-55, M.C. Joshi, Mathurā as an Ancient Settlement, in D. M. Srinivasan, Gen. ed. Mathurā: A Cultural Heritage, (pl. 18.11A).</td>
</tr>
<tr>
<td>Pd. IB</td>
<td>Ambarish Tila</td>
<td>Slight and insignificant growth of settlement – associated with remains of a few mud floors</td>
<td>17 sherd of NBPW along with PGW—some new designs, a pestal, antimony or Copper rod a few iron implements, Disc of translucent glass, gemsmen. bud and</td>
<td>IAR, 1975-76, p. 53-55 M.C.Joshi, Ibid, p. 166-167</td>
</tr>
</tbody>
</table>

## Chapter II: Evolution of Settlement Pattern at Mathura

<table>
<thead>
<tr>
<th>Period</th>
<th>Site</th>
<th>Floor Plan</th>
<th>Finds</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pd. I</td>
<td>Dhulkot MTR 1 &amp; 3, 4, 7, habitational area</td>
<td>Mud platform.</td>
<td>torso fig. Terracotta bead. (grey and red ware sherd of sand and clay mixed with water.)</td>
<td>\textit{IAR}, 1973-74, p. 31.</td>
</tr>
<tr>
<td>II.</td>
<td>Katra, MTR - 9</td>
<td>One platform had large sized backed bricks (62 x 42 x 7/9 cms) facing dislocated soakage jars possibly forming a chain.</td>
<td>Bright and dull Red Ware potteries, vases, dishes, bowls, sprinklers stamped incised &amp; painted.</td>
<td>\textit{IAR} , 1976-77, p. 54-55.</td>
</tr>
</tbody>
</table>
### Chapter II: Evolution of Settlement Pattern at Mathurā

<table>
<thead>
<tr>
<th>C.A.D.</th>
<th>Human and animal teracotta fig. designs on potteries.</th>
<th>A seal reading ‘vijayaśivagraṁa rādhāh’ and 2 later Kusāṇa coins.</th>
<th>Incense burners, basins, sprouted jars, traditional auspicious symbols, Triratna, Śri vatsa, sankha, floral motifs circles, loops, spirals etc. on the potteries.</th>
<th>Ivory comb, pieces of shell bangles, inscribed pot sherds, heads of semi-precious stones and a terracotta rattle bearing Mangalya lanchhanas. Votive tanks, terracotta fig. Human and animal, including Vamanaka.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pd. III Chamunda</td>
<td>Brick structure (found at a trial trench)</td>
<td>NBPW and associated wares.</td>
<td>IAR, 1973-74, p. 31-32.</td>
<td>IAR, 1974-75, p. 48-50.</td>
</tr>
<tr>
<td>III Śaka-Kusāṇa</td>
<td>An impressive tank complex with a circular structure near its entrance — Made of bricks of various sizes (40×26×5 cm), (38×26×4 cm) and (30×15×5 cm)</td>
<td>Inscription of 5th regnal yr. of Kaniska which refer to a gift of tank by a lady Vishakhamitra.</td>
<td>Torso of Tirthankara with a fish like Śri vastra mark.</td>
<td>A fine fina head</td>
</tr>
<tr>
<td>Kankali Tila, MTR-5</td>
<td>It is planned as rectangle (8.10 x 9.10 cm) with paved brick floor and a ramp on the eastern side and irregular ancillary compartments along its northern, southern sites. Set into the north wall of the tank was stone channel (pranala) as an inlet for filling the tank up with water. The tank</td>
<td>2 stone plaques one depicting Mahisumardini and other Parvati in the post-Gupta style, pottery — sherds of red ware.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**III. Śaka-Kuśaṇa**

<table>
<thead>
<tr>
<th>Tila</th>
<th>Mound</th>
<th>Description</th>
<th>Finds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kankali</td>
<td>A large and platform with central passage and remains of few mud floors.</td>
<td>Fine torso, Indo Greek coins</td>
<td></td>
</tr>
<tr>
<td>Ambarish</td>
<td>Baked brick structures predominating over mud structures. Ring wells, rammed floors of mud and brick jelly – in one case, pot sherds</td>
<td>Pots with single stamped motif and ordinary spouted jars in red ware. Terracotta plaque with female figurines, a male lute player a frontal view of bullock cart. A seal reading <em>Yūpa lathikas</em>, - a few cast copper coins,</td>
<td></td>
</tr>
<tr>
<td>Govindnagar</td>
<td>marked by the remains of floors, mud, surkhi, brick bats and bricks significant structures were lime plastered brick floors and a complex of 12 mud blocks (platforms) of varying sizes containing in one case, 2 damaged storage jars in situ. Other interesting remains in the courtyard is paved with brickbats and bricks with border of brick on edge, super imposing floors of compact mud. Two longish oven and a ring well associated with the upper levels of this period were also unearthed.</td>
<td>Fore part of a lion fig. in stone, terracotta plaques depicting various deities including a Devi with a pair of fish; beads of semi precious stones, copper coins, iron objects, dish in grey ware, deep bowl.</td>
<td></td>
</tr>
</tbody>
</table>

*JAR, 1974-75, p.48*  
*JAR, 1975-76, p.53-55.*  
*JAR, 1976-77, p.54-56.*
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| IV. | MTR-9 | Remains of wall and a drain in baked bricks and mud houses. |
|     |       | Significant features in the construction of an inner enclosure of fortification of mud. |
|     |       | It was raised by providing packings of wet mud and clay lumps, in oblique fashion which were then further strengthened by retaining wall of discarded bricks, brick bats, tiles and burnt lumps of mud along the outer edge. The width and height of the retaining wall varied from 22 to 40 cms and 80 cms to 1.0 m respectively. Maximum basal width of inner fortification was about 17 m. |
|     |       | Remains of animal bones and ash in a pit – ritualistic association to be determined. |
|     |       | In tank complex, a platform like projection was found at its S-N corner besides certain later structural remains over the tanks western wall. |

- Most of the floors were disturbed by later pit activity. The use of bricks and brick bats were confirmed mostly to structures built in the later half of the period. Structures like large courtyard, a lime of plastered floor with storage jars and mud platform complex appeared to have been planned as some kind of public or communal building. |
- Seals and sealings with legends *Bhutapala-sa-gamāsa* and *Mahārājā tra (?)mah* respectively. Soap stone lids, terracotta stamp engraved with symbolised peacock and ivory stand, Kusāṇa coins, several human and animal terracotta figures modelled by a single or double moulds and fully and partially handmade with sophisticated crude features. |
- Mother and child, lower part of a fig., probably Ganga, Vamanakas, moulds of Yakshi (similar to those found on the contemporary railing posts – a Śaka-Kusāṇa soldier, a princely fig., representation of female (foreign lady), Nāga s, Bodhisattvas, Maitreya, Ganga, Lakshmi. |

*IAR, 1975-76, p. 53-55.*
| Pd. IV | Govindnagar mound, MTR-13 | Mainly represented by partly extant surkhi, mud and brick floors with marks indicating use of lime. | Red Ware pottery, flaming Buddha sculpture, (Stratified layer) Stone inscription, of Huvigka of yr.50 recording probably gift to Dhanyakarma Vihāra. | *IAR*, 1976-77, p. 54-55. |