CHAPTER VII
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TERRACOTTA, METAL, STONE AND MISCELLANEOUS OBJECTS

The chapter delineates the archaeological materials in forms of terracotta, metal, stone and other miscellaneous objects unearthed or discovered from the Kushāṇa period at Mathurā and Sonkh.

TERRACOTTA OBJECTS:

The terracotta objects of the Kushāṇa period reported from the Mathurā region could be divided into two morphological characters—terracotta sculptures and other terracotta objects. Other terracotta objects include household objects such as dabbers, reels, spindle whorls, skin rubbers, stoppers; game objects like terracotta wheels, toy carts, discs, rattles, terracotta balls, gamesman; ornamental objects like terracotta bangles, pendants and beads; religious objects like votive tanks; a few miscellaneous specimens like stamps, potters' stamps, potters' moulds, jewellery moulds, coin moulds, seals & sealings etc. Besides, a large number of terracotta sculptures (in forms of human and animal figures) have been reported from this region. In this work we have incorporated the published materials besides some specimens kept in the Reserved Collection, Purana Qila, New Delhi. We have limited scope to extend our view point about the aesthetic sense of art objects in the medium of terracotta. However, the present work summarizes the elementary form of terracotta objects meaningfully explained to interpret the overall utilitarian aspect of such objects according to their functional values. The pattern followed here is essentially a typological classification along with brief morphological descriptions.

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TERRACOTTA SCULPTURES:

The present analysis on terracotta sculptures of the Kushāṇa period collected from the Mathurā region is based on different sources—excavated and explored. Besides there are few more specimens recorded here and they are available in the collections of the Mathura Museum, Baroda Museum, Allahabad Museum, Bharat Kala Bhavan, Varanasi and Lucknow Museum.

The Kushāṇa period was marked by the prolific use of stone sculptures, but enormous numbers of terracotta sculptures have also been found from all over the Indian sub-continent, mainly from Mathurā and Taxila. According to Benjamin Rowland\(^1\), the very geographic position of the Indo-Scythian Empire striding the trade routes between Rome, Iran and China made it in many ways the very centre of the world in the early centuries of our era. Its role in history was one of absorption and diffusion and this function is nowhere more strikingly illustrated than art that flourished under Kujula Kadphises and his successors. S.K.Saraswati opines “The terracotta art of this period seems to represent a movement, parallel to the contemporary plastic art in stone and bears the stamp and impress of the later”.\(^2\) Stylistically, the terracottas of this period represent both refined and crude variety. Agrawala states that the re-appearance of a cruder art in this period was due to the influence of wild tribes from Scythia.\(^3\)

During this period two forms of techniques were adopted. One was continuing from the earlier period and the other was newly introduced. The types, already in use were- 1) moulded face with modelled body, 2) hollow figures and 3) transverse holes in legs. The new techniques introduced in the Kushāṇa period were 1) double mould. 2) use of point on the surface of the body of the animal, 3) large size hand modelled of animals and 4) painted figures.\(^4\)
Technically, the Kushāṇa terracotta sculptures found from the Mathurā region represented all the methods of terracotta productions. They comprised of totally hand-modelled figures, figurines with moulded faces and hand-made bodies, plaques prepared of a single mould and figurines and toys made by double moulds. Some cruder figures found from the Mathurā excavation show the use of double moulds. Few figurines had evidence of glazing on them. The double mould technique first occurred in Mathurā only during the Kushāṇa period. This technique probably came to India as a result of trade contacts with the Roman world. Regarding the appearance of double-mould technique in the Mathurā region, the observations of M.C.Joshi and C.Margabandhu require further explanations. Their view that, “In Mathurā this knowledge possibly reached either through the north-west or Deccan or both. Mathurā craftsmen, who worked in the terracotta medium, it seems, learnt and mastered this technique in a short period.”

The terracotta sculptures found during excavations at Mathurā revealed sculptural styles, both indigenous and external origin. The figurines executed in the local art tradition or of indigenous origin can be grouped in to two types: i) well finished and sophisticated figures resembles to the contemporary sculptural representations and ii) homely type showing partly or fully hand-modelled body bearing appliqué decorations in many cases and emphasized with incised lines and dots. The images of Nāgas, Yakshas or figurines fixed on the votive tanks were executed in this style. Amongst the external types, some showed north-western or Central Asian influences in dresses and treatments and a few had affinity to contemporary Deccan terracottas. Images of Yakshīs, Vāmanakas, deities like Lakṣmī, secular types like soldiers besides several heads with expressive features and animal figurines were depicted in this style. At Sonkh the type of ‘sophisticated’ or ‘typical Kushāṇa’ terracottas are best reflected in the hollow plaques.
Terracotta sculptures could be divided into two broad categories—human figures and animal figures. Here we should mention that our discussion on terracotta sculptures (of the Kushāṇa period) is brief in nature as there are lots of such objects reported from the Mathurā region. Moreover, detail icono-graphic descriptions of all terracotta sculptures are also beyond the scope of our study. The patterns we have followed here is essentially a typological classification along with some brief morphological descriptions—

**Human Figures:**

Human figures are further divided into religious and secular/non-religious figures.

**Religious Figures:**

The religious figures consist of figures or plaques related to the religious practices/beliefs of the people, represented by gods and goddesses of different pantheons, other deities like Nāgas, Vāmanakas, Gaṇas, Yakshas & Yakshīs etc.

**Brāhmaṇical Deities:**

**Durgā:** At least two plaques depicting Goddess Durgā have been unearthed from the Kushāṇa period at Sonkh. The goddess is portrayed as a standing two-armed goddess with dagger/sword and shield. Amongst them the best representative specimen is described below-

1. Plaque with two-armed standing goddess has been unearthed from the Kushāṇa period (Level 17/16) at Sonkh. Face and attributes of the goddess are chipped off. The goddess wears a shawl over left
shoulder and the lower garment is kept in place by a girdle. Right arm bent upwards and probably holds a sword and left arm akimbo and perhaps holds a shield. It is light brown in colour, 20 cm in height. 9 (Pl. CXXXII, 1)

During 1965-66, a headless terracotta figurine of Goddess Durgā of 2nd-3rd century A.D. has been found from Mathura. It depicts a lion near the feet of the deity and is now deposited in the Mathura Museum.10

**Durgā-Mahishāsuramardinī:** Durgā in her Mahishāsuramardinī form was very popular during the Kushāṇa period. She is represented as four-armed, six-armed or eight-armed goddess.

The excavations at Sonkh have yielded a large number of Mahishāsuramardinī figures from the Kushāṇa period. The goddess is represented either with four or six arms. The buffalo is standing on his hind legs with head uplifted in front of the goddess and body stretched across her thighs. The goddess is pressing down its spine with her right lower hand and grabbing its head by the throat. In case of four armed figures the upper two hands hold either dagger and shield or shield and short-shafted *trisula* with prongs turned upwards. In case of six armed figures, the highest hands are holding a garland. Eleven such Mahishāsuramardinī plaques are illustrated in the excavation report of Sonkh. The best representative specimens are described below-

1. One such plaque unearthed from the Kushāṇa (Level 16) period at Sonkh showing the four-armed Goddess Durgā in the act of killing the buffalo demon. The goddess is ready to attack the buffalo standing on his hind legs with head uplifted in front of the goddess and body stretched across her legs. Her right front arm is lowered to the back of the animal with the hand pressing on its spine, and the left lower hand grabs its neck. The upper two arms are raised in an unusual position holding a trident like object with both the
hands above the head, ready to strike down the body of Mahisha. Hartel preferred to identify the object in the upper hands as a vajra rather than a trident. This plaque is red-brown in colour and 18.3 cm in height.11 (Pl. CXXXII, 3)

2. Another upper half of a plaque unearthed from late Kushāna (Level 17) level at Sonkh depicts six-armed Durgā killing the buffalo demon. The goddess is bejewelled with earrings, necklace of beads, armlets and bracelets. Back hands hold a garland above the head, middle hands hold a dagger and shield respectively. Front right arm lowered to the spine of the Mahisha and the left arm grabs the neck of the demon. This plaque is red-brown in colour and treated with dark brown slip. It is 13.2 cm in height.12 (Pl. CXXXII, 2)

A few figures of Mahishāsura-mardini of the Kushāna period found from the Mathurā region is now housed in the Mathura Museum. The goddess is depicted as the killer of the buffalo-demon, Mahisha.13 (Pl. CXXXII, 4 and 5) Almost similar types of Mahishāsura-mardini figures have been found from Stratum III (350-750 A.D.) at Ahichchhatra.14

Gaja-Lakṣmī: - Lakṣmī, the goddess of plenty and prosperity was one of the most popular deity of the Kushāna period. In her Gaja-Lakṣmī form she is seen accompanied by two elephants.

One such highly fragmented terracotta figure of Gaja-Lakṣmī, made of double moulds has been reported from the Kushāna period at Mathurā. Due to the highly corroded condition, only two elephants are visible.15 (Pl. CXXXIII, 1)

Gaṅgā: - Lower part of a female figure riding on a makara, probably identified as Gaṅgā, has been unearthed from the Kushāna period at Mathurā. This was carved in bold relief.16
Vasudhārā: - Vasudhārā is another very important deity of the Kushāṇa period. Vasudhārā was also found to be associated with the Buddhist pantheon in the later periods. She was also worshipped as the goddess of plenty and prosperity and usually depicted as holding pūrṇaghāṭa and twin fish. A number of moulded plaques of Vasudhārā depicting her as a standing figure with left hand placed on the girdle and the right hand holding a string with a pair of fish suspended from its end are now kept in the Mathura Museum.

Kāmadeva: - Kāmadeva is represented as the God of Love and is depicted with a bow of sugarcane and five arrows (Paṇchaśara) as his general attributes. A few terracotta figurines of Kāmadeva have been reported from Mathurā. A figure of Kāmadeva of the Kushāṇa period housed in the Mathura Museum depicts the God standing inside a field of flowery border, overstrewn with flowers and decked with garlands of flowers as well as wreaths of mango leaves and spring. He holds the sheaf of his invincible darts and the tall bow.

Surya: - A Surya image of the Kushāṇa period (1st century A.D.) from Mathurā is now housed in the collection of Baroda Museum. It is depicted as a standing male figure with its left hand holding a bow and right hand probably holding a lotus bud. He wears a full-sleeved tunic (vārbāṇa), a waist band (kamārband), tight fitting breeches (svasthāna) as lower garment. The figure has a pair of wings and is ornamented with multi-stringed necklace. The figure is almost similar to a stone image of Surya in the Mathura Museum. It measures (10X3.5X2) cm.

Krisna: - A plaque of the Kushāṇa period from Mathurā now housed in the Baroda Museum depicts the Kāliyadāmana episode of Krisṇa’s life.
Śiva: - An ekamukha Śiva linga, assignable to the Kushāṇa period has been found in recent years from Umari village, Mathura.22 (Pl. CXXXIV)

Śiva represented in his anthropomorphic form has also been depicted in a terracotta figure from Mathura, now kept in the collection of Ariane Dandois-Faye, Paris. It was probably belonged to 3rd century A.D. and 20.3 cm in height. It was a somewhat pudgy, sturdy male figure wearing a transparent dhoti and a long, bulky scarf. The image represents the Ūrdhvareta Śiva, as indicated by the ithyphallic form. The head, right arm and feet of the figure are missing. He holds a kamandalu in the left hand.23 (Pl. CXXXV)

Buddhist Deities:

Bodhisattva: - Mathurā excavations have yielded two fragmentary figurines, one up to the bust portions (Pl. CXXXVI, 1) and another is a standing headless figure dressed in dhoti and uttariya (Pl. CXXXVI, 2) from the Kushāṇa period. In both the cases the right hand is raised in abhayamudrā. The standing figure holds a sprinkler like object in the left hand. Both the figures may be identified as Bodhisattva Maitreya.24

A seated figure of Bodhisattva with hand raised in abhaya pose is housed in the collection of the Mathura Museum.25

A headless Bodhisattva Maitreya figure of terracotta has been unearthed from the Kushāṇa period (Period IV) at Hastinapura.26 These figures bear close resemblance to the stone images of Bodhisattva Maitreya found from the Kushāṇa period at Mathurā and Ahichchhatra.27 Besides, a number of terracotta Buddha and Bodhisattva figures have been reported from various sites (Kasia, Sarnath, Sravasti, Ahichchhatra, Farrukhabad, Bodhgaya, Nalanda etc.)28 in the Gupta and post-Gupta periods.
Other Deities:

The other deities recorded and documented here have suggested their multi-faceted religious affiliations, though not uncertain. In this context it is to be noted that deities like Mātrikās, Kubera, composite figure of Kubera and Hāriti, Yakshas & Yakṣīs, Nāgas, Gaṇa, Dwarfish/Vāmanakas found to have associated or may have associated with the Buddhist, Jaina and Brahmanical pantheons so far as the textual and literary records besides, traditions are concerned. Therefore, it is very difficult to put the terracotta sculptures of these deities in a particular religious order.

Kubera and Hāriti: - Hāriti is the consort of Kubera and a well-known Buddhist deity. Earlier, Hāriti was projected as a terrible goddess who devoured children, but when associated with Buddhism she transformed as a goddess who protected children from disease and hunger. That's why she is always depicted as carrying a child in her lap. Kubera is the chief of the Yakshas.

Mathura Museum possesses joint figures of Kubera and Hāriti of the Kushāna period. In a figure Kubera and Hāriti are depicted as seated side by side with Kubera holding the mongoose purse and the bowl and Hāriti holding a purse and a child in her arms. Mathura Museum possesses joint figures of Kubera and Hāriti of the Kushāna period. In a figure Kubera and Hāriti are depicted as seated side by side with Kubera holding the mongoose purse and the bowl and Hāriti holding a purse and a child in her arms. (Pl. CXXXVI, 3)

Mother Goddess/Mātrikās: - In case of Kushāna Mātrikās or Mother Goddesses, only the female figures with one, two or more children are generally known as Mother Goddesses or Mātrikās. A large number of Mother Goddess figures of the Kushāna period both in stone and terracotta have been found from this region. The Mātrikās are usually depicted as seated or standing images and are human headed or bird headed or animal faced figures.
Mathurā excavations have yielded two damaged figurines of Mother Goddesses from the Kushāṇa period (Period IV). One of them exhibits a horse-headed woman holding a child in her left arm. According to the excavators, this figurine may represent a Kimpuruṣī or Aśvamukhi Yakshi.\(^{31}\) (Pl. CXXXVII, 1) The second one depicts a seated female with baby on the lap.\(^{32}\) (Pl. CXXXVII, 2) Besides these, a crude conventional type of Mother Goddess, perhaps fixed on a votive tank has been found from the Kushāṇa period at Mathurā.\(^{33}\) (Pl. CXXXVII, 3)

At least three Mother Goddess figures (two from the occupational levels and one from the area of the Apsidal Temple 2) have been reported from the Kushāṇa period (Period V) at Sonkh. The best representative specimens are illustrated below-

1. Fragment of a plaque showing seated Mother Goddess with child in her lap has been found from the Kushāṇa period (Level 17) at Sonkh. Head, left arm and greater part of legs of the figure are broken. Her right hand touches her left breast and a clumsy shaped child is held in the left hand. It is red-brown in colour, 10 cm in height.\(^{34}\) (Pl. CXXXVII, 4)

2. Seated Mother Goddess (Pl. CXXXVII, 5) with a child has been unearthed from the Apsidal Temple No. 2 at Sonkh. The right hand is raised with the palm turned inwards and the left arm is holding a stiffly made child. An offering bowl is placed between the legs. The specimen is red in colour, 21.0 cm in height and 12.0 cm in diameter.\(^{35}\)

Mother Goddess figurines have been found from the contemporary Kushāṇa periods (Sub-Periods V-VIII) at Kausambi\(^{36}\) and at Ahichchhatra\(^{37}\) and also from the Gupta period (Stratum IIIb- A.D. 550-650).
Kubera: Kubera is the chief of the Yakshas and the lord of wealth. Kubera is generally represented as a pot-bellied figure and he is represented either individually or accompanied with Laksñmi and Hāriti.38

At least nine mutilated figures (mostly in forms of torsos and busts) of Kubera along with at least eighteen fragmentary parts of bodies of Kubera of the Kushâna period have been listed in the excavation report of Sonkh. The god is depicted as a big-seated two-armed figure with holding a cup/bowl and a longish object, probably a mongoose purse. The broken arms found from the Kushâna levels (Levels-22-18) were all parts of large Kubera figures having incised decorations and a bowl or purse in the hand. The broken legs found from the Kushâna levels (Levels 22-18) were unnatural/square in shape, flat foots showing either grooved or normally carved toes.39

Seven best specimens with representative features are described below-

1. Bust of a pot-bellied figure of Kubera unearthed from the Kushâna period (Level-20) at Sonkh. The figure bears slanting eyelids, pierced eyeballs, three-stringed horizontally combed moustache, broad winged ears with two holes each, a large navel pit, bejewelled with large and richly ornamented ear-rings and two necklaces. Both the arms are bent having an oblong object in the right hand and a mutilated bowl in the left hand. It is probably a seated figure. The oblong piece in the right hand may be identified as mongoose purse. It is handmade and brown in colour treated with red slip. It is 17.5 cm in height.40 (Pl. CXXXVIII, 1) In one figure the mongoose purse or flask is held in the left hand.41

2. Head of Kubera with moustache, eyebrows, eyelids, earrings and upturned hair marked by sharply incised lines has been unearthed from the Kushâna period (Level 21) at Sonkh. It is handmade, 11.2 cm in height and grey-brown in colour.42 (Pl. CXXXVIII, 2)
3. Mutilated left arm of a Kubera holding a longish object, probably a mongoose purse has been unearthed from the Kushāṇa period (Level-21) at Sonkh. It is hand made, brown in colour and 12.3 cm in length.\textsuperscript{43} (Pl. CXXXVIII, 3)

4. Lower left arm of a Kubera figure with traces of one incised bangle has been unearthed from the Kushāṇa period (Level 20/19) at Sonkh. The hand holds a bowl. It is hand made, red in colour and 8.7 cm in length.\textsuperscript{44} (Pl. CXXXVIII, 4)

5. Fragment of a leg of a Kubera (Pl. CXXXVIII, 5) figure with one bangle has been unearthed from the Kushāṇa period (Level 22) at Sonkh. It is hand modelled, red-brown in colour and 4.6 cm in height.\textsuperscript{45}

6. Big foot of a Kubera figure (Pl. CXXXVIII, 6) with grooved toes has been unearthed from the Kushāṇa period (Level 21) at Sonkh. Two bangles are placed one above the other and connected by grooves. It is hand modelled, dark-grey in colour and 4 cm in length.\textsuperscript{46}

7. Fragment of the lower part of a sitting figure of Kubera has been unearthed from the Kushāṇa period (Level 19) at Sonkh. Two bent legs placed on a flat pedestal and parts of the mutilated arms resting on the thighs are remaining. It is hand modelled, red in colour and 12 cm in height.\textsuperscript{47} (Pl. CXXXVIII, 7)

A Kubera figure with high turban and large belly is now housed in the collection of the Mathura Museum.\textsuperscript{48}

Almost similar types of figures have been reported from Ahichchhatra\textsuperscript{49} (Stratum IIIa- 650-750 A.D.) and Taxila\textsuperscript{50} (between Phases I and II - 1\textsuperscript{st} century B.C. to A.D. 50).

**Yakshas & Yakshis:** - *Yaksha* is the oldest and most popular deity deeply rooted in the folk beliefs as well as in the organized religions. His consort is known as Yakshis and she is also treated alike. Mostly they are worshipped under a tree.\textsuperscript{51} A number of Yaksha and Yakshi figures have
been depicted in the stone as well as terracotta art of the Mathurā region.

Excavations at Mathurā have yielded a numbers of fragmentary reliefs, plaques, moulds depicting Yakṣī figures from the Kushāṇa period. The first of these figures is found in a terracotta mould depicting a Yakṣī with a placid facial expression standing on a guhyaka with a tiny figure on one side.52 (Pl. CXXXIX, 1). The conception and features of this figurine is almost similar to the famous Yakṣī depicted on the Mathurā railing pillars of the Kushāṇa period. Another Yakṣī figure from a plaque wears beaded ornaments around the face.53 (Pl. CXXXIX, 2). Another noteworthy specimen from the Kushāṇa period is represented by an unfinished relief with a smiling face and bun shaped hair arrangement.54 (Pl. CXXXIX, 3) Another significant broken plaque relieved with the lower half of a female figure with neat treatment wearing transparent dhotī, coiled pādārgadas and relatively heavier mekhalā has been discovered from the early levels of Period IV. It seems to represent a transitional stage between Śuṅga and Kushāṇa plaques.55 (Pl. CXXXIX, 4).

A small group of terracotta figures recorded as ‘Boyish Figures’ in the excavation report of Sonkh have been discovered from the Kushāṇa period at Sonkh.56 V.S. Agrawala described them as “Terracotta Yaksha showing a corpulent boyish figure with a bell round the neck, the hands pressed against the breast and conspicuous genitals”.57 Iconographically these figures are different from the dwarfish male figures.

Seven such fragmented Yakṣa figurines, mostly busts or torsos of the image were illustrated in the excavation report of Sonkh. All of them belonged to the Kushāṇa period. The best representative specimens are described below:

1. Boyish figure having clenched fists on breast, pot bellied with navel, thick eye lids and protruding eyeballs, loosely combed
strands of hair and prominent genitals has been unearthed from the Kushāṇa period (Level 21) at Sonkh. It is made of double moulds, red in colour and 6.8 cm in height.58 (Pl. CXXXIX, 5)

2. A pot-bellied headless boyish figure (Pl. CXXXIX, 6) has been reported from the Kushāṇa period (Level 21) at Sonkh. It has clenched fists pressed against the breast. He is bow-legged with a plain space of clay in between on which the genitals are conspicuously displayed. It is made of double-mould, red in colour and 5.9 cm in height.59

3. Boyish figure with hands on breast has been unearthed from Apsidal Temple No 2 at Sonkh. The round face depicts impressed eyes and pricked pupils, a strong nose with nostrils. This figure is slightly carved backwards and therefore considered to be a handle. It is of Kushāṇa origin, brown in colour and 9.8 cm in height.60 (Pl. CXXXIX, 7)

A Yaksha figure of the 2nd century A.D. from Mathura is now housed in the Bharat Kala Bhavan, Varanasi exhibits a different type of seated Yaksha figure. His body is corpulent with sunken eyes and grinning face. He wears a skullcap, a necklace and a heavily folded tunic. His both hands are slightly stretched.61

Five terracotta Yaksha figures of the Kushāṇa period are now in the Baroda Museum. Among them one is a corpulent boyish figure of Yaksha with a smiling face and raised right hand. It measures (10X5X4) cm.62 A similar type of Yaksha figure, identified as Kumbhamuṣka Yaksha is housed in the Mathura Museum. Another Yaksha figure in the Baroda Museum depicts the hands pressed close to the chest, it looks as if he is playing with some musical instrument like symbols. The genitals are shown. It measures (8X3x2) cm.63

Nāgas and Nāgīs: - Nāgas were also found to be assimilated in all the major faiths in their desire to identify themselves with the masses. In
their anthropomorphic form the Nāgas are depicted as human figures carrying an \textit{amritghata} or a cup in the left hand and right hand raised in \textit{abhaya}mudrā. Snake hood is present over the heads and its coils at the back. Sometimes Nāgas are also depicted along with the Nāgis.\textsuperscript{64}

Mathurā excavations have yielded few Nāga images mainly in form of busts and a standing figure with a missing head has been unearthed from the Kushāṇa period. The Nāga images are depicted as capped or turbaned males with large open eyes and bold and even crude features with a multi-faced serpent-hood above. The right hand is raised above the shoulder with an open palm and the left arm perhaps holds a cup. These Nāga images could also be identified as Balarāma.\textsuperscript{65} (Pl. CXL, 1 and 2) A similar type of Nāga image has also been reported from Ahichchhatra.\textsuperscript{66}

Excavations at Sonkh have also yielded Nāga images from the Kushāṇa period. In all the images Nāgarāja is depicted as a seated or standing male figure with serpent-hood with its right hand raised in \textit{abhaya}mudrā and left hand holding a flask/ water vessel. The best representative specimens are described below-

1. Fragment of a larger plaque showing the torso of a standing male figure unearthed from the Kushāṇa period (Level 17/16) at Sonkh. The man is wearing a \textit{dhoti} with a shawl. The right hand is raised in \textit{abhaya}mudrā with the palm turned inwards (\textit{vyāvṛtta} position) and the left hand holds a flask. Traces of two incised small circles on the right side help us to conclude that these are serpent-coils depicted at the sides of the man, which tends us to identify him as a Nāga. Although this figure has been unearthed from the late Kushāṇa level, but from its stylistic background the plaque might have originated from early Kushāṇa level. It is red-brown in colour and 13.8 cm in height.\textsuperscript{67} (Pl. CXL, 3)
2. Fragment of a hollow male head in typical Kushāṇa style reported from the Apsidal Temple no 2. The head is bejewelled with tripartite earring, a sort of chain strap decorated with a rhomboid pattern running around the face. This face most probably represents a Nāgarāja and was placed under a nāga hood. It is 12 cm in height and 10 cm in breadth.68 (Pl. CXL , 4)

3. Mould of a medallion depicting half portion of a seated Nāgarāja (Pl. CXLI, 1) has been unearthed from Level 22/21 at Sonkh. Face and body portion of the Nāgarāja appear on the left side of the cobra-hood. The Nāga is ornamented with ear-ring, necklace, armlet and bracelet. The left arm is akimbo with hand holding an indeterminate object. It is grey in colour and 18 cm in height.69

A five hooded female Nāga figure (Nāgi) (Pl. CXLI, 2) of the Kushāṇa period from Mathurā is now housed in the Mathura Museum collection.70

Nāga images have also been reported from the contemporary Kushāṇa period at Kausambi71 (Sub-Period VI) and from Ahichchhatra72 (Stratum III-II- A.D. 350-850) and from the Gupta and post-Gupta periods.

Gana: - Gaṇas are generally found to be associated with the Yaksha images. A charming specimen of Gaṇa figurine with well-moulded chubby face decked with wheel- shaped kunḍalas and ornate turban has been unearthed from Period IV at Mathurā. It may be a part of some terracotta Yaksha image.73 (Pl. CXLI, 3)

Dwarfish/Vāmanakas: - Dwarfish figures or Vāmanakas are semi- divine deities generally associated with the main deities or Yaksha-Yakshī images. These figures are generally depicted as nude child like figures with hand close to chest. Several such dwarfish figurines with arms lifted close to the chest and wearing a mekhala and kajakas have been found
from the Kushāņa period during excavations at Mathurā.74 (Pl. CXLII, 1) One such figure with a moulded head and hand modelled body and hand resting on the waist has been reported from a dump at Mathurā. On stylistic ground this figure may be attributed to the later part of Period IV.75 (Pl. CXLII, 2)

A number of nude dwarfish figures have been reported from Period III (Mitra) to Period V (Kushāņa) at Sonkh. But majority of the figures come from Period IV, i.e. Kṣatrapa period. They are normally depicted as a naked bow-legged male figure with joined feet, shaven head, sometimes with pointed skull and short projecting ears. The space in between the legs is filled with a thin layer of clay on which the genitals are conspicuously displayed. The hands are throughout shown as clenched fists. According to the different position of the hands the excavators tried to classify the dwarfish figures of Sonkh into following categories-

a) Clenched fists near hips and groin.
b) Clenched fists near waist.
c) Clenched fists on chest.
d) Right fist on chest.

Except the last sub-type all of them are reported from the Kushāņa levels.76 A few selective specimens representing above mentioned categories are illustrated below-

1. Fragment of bow-legged nude dwarf with broken head and lower legs, damaged right arm and thigh has been unearthed from the Kushāņa period (Level20/19) at Sonkh. The chest of the figure is slightly modelled and the clenched fists are near the hip and groin. Genitals appear between thighs. It is made of double-moulds, red - brown in colour and 11.3 cm in height.77 (Pl. CXLII, 3)

2. Bow-legged nude dwarfish male figure with broken lower legs, modeled shaven head has been unearthed from the Kushāņa period (Level 20) at Sonkh. Arms of the figure are bent and the
clenched fists are near the waist. Genitals are clearly displayed between thighs. It is made from double moulds, brick-red with whitish paint and 8.8 cm in height.78 (Pl. CXLII, 4)

3. Fragment of a nude dwarfish male figure with broken head and legs, and punchy abdomen has been reported from the Kushâna period (Level 17) at Sonkh. The arms of the figure are bent with the clenched fists on chest. It is made of double-moulds, red in colour and 6.1 cm in height.79 (Pl. CXLII, 5)

Apart from the above figures a completely different type of dwarfish figurine has been unearthed from Kushâna period (Level 20/19) at Sonkh. This dwarfish male figure has pricked pupils, head dress consists of a turban with central bulge, bejewelled with earrings and a long three-stringed necklace with cylindrical pendants. Hands of the figure seem to touch each other above pot-belly. The thighs are placed in bow-legged position with plain space of clay in between and genitals upon it. It is red in colour with traces of mica dust and 7 cm in height.80 (Pl. CXLII, 6)

A dwarf figure of 1st century A.D. from Mathurâ now housed in the Bharat Kala Bhavan, Varanasi depicts a standing male figure with his hands placed near the chest.81

A dwarf figure of the 2nd century A.D. from Mathurâ is now housed in the State Museum, Lucknow. The man has a round face, grooved eyelids and an unusual long mouth. Both the hand palms rest on the sides of the chest and the feet are joined at the bottom. It is 12.1 cm in height.82 (Pl. CXLIII)

A number of such terracotta dwarf figures have been found from the contemporary Kushâna Stratum IV (100-350 A.D.) at Ahichchhatra.83

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Besides, the above-mentioned religious human figures/plaques there are a number of indeterminate fragmented pieces of figurines unearthed from the Kushāṇa period at Mathurā and Sonkh.

**Non-Religious and Miscellaneous Figures:**

The non-religious and miscellaneous figures or plaques related to the secular aspects of human life were mainly represented by detached male and female heads, princely male figures, female figure with Śaka/Kushāṇa attire, plaques depicting different scenes of day to day life of the people etc.

**Mother and Child:** - Besides the Mother Goddess figures some figures with depictions of mother and child have been reported from the Mathurā region. Mathura Museum also displays similar type of terracotta Mother and Child figurines of the Kushāṇa period. One such figurine from Mathurā depicts a female standing with a child in her left arm.84 (Pl. CXXXVII, 6)

At least three Mother and Child figures from Mathurā are now kept in the Baroda Museum. All of them belonged to the Kushāṇa period. One such specimen is described below-

1. A small terracotta plaque shows a standing female with her left hand holding a child sitting on her waist. The faces of both the figures are worn out. The woman wears a long ankle reaching (gulphāvalambī) lower garment (antariya), which is shown by an oblique girdle (mekhalā). The child is naked and only mekhalā of a single strand is visible. This plaque has close similarities with the Mother and Child figurine in the Mathura Museum. The specimen measures (9.5 X 8.3X2) cm.85
During 1973-74, a terracotta standing figure of Mother Goddess (17.5cm in height) of circa 3rd century A.D. had been discovered from Bharatpur mound (near Mathura Museum). The figure has traces of appliqué rosette decorations on the head. It wears a central drum-shaped bead and a plain girdle.

Śālabhaṇjikās: - During the Kushāṇa period female figurines with detailed ornamentation have been found from the Mathurā region. The most important female figures of this period are the Śālabhaṇjikās. The term ‘Śālabhaṇjikā’ originally denoted a female sport involving in the gathering of śāla flowers by women standing under blossoming śāla trees. Mathurā excavations have yielded fragmentary terracotta Śālabhaṇjikā images from the Kushāṇa period. The lower portion of an image depicts a female in standing pose. (Pl. CXLIV)

A number of terracotta Śālabhaṇjikā figures of the Kushāṇa period from Mathurā are now housed in the Mathura Museum. All the figures are in broken condition. They stand in tribhāṅga pose, probably under a blossoming tree. The female figures are adorned with jewelled ornaments like earrings, necklaces, bracelets, girdles, anklets and dressed in transparent lower garments. In one hand she holds a branch of a blossoming tree and the other hand rests on the waist or hangs down. (Pl. CXLV)

During 1965-66, a miniature plaque showing a Śālabhaṇjikā motif has been discovered from Ral-Bhadar, Mathura. Stylistically this motif is similar to the Kushāṇa railing pillar figurines and thus may be attributed to the Kushāṇa period.

Almost similar types of Śālabhaṇjikā figures of the contemporary Kushāṇa period from Kauśāṃbi and Rāighāt are now housed in the collection of Bharat Kala Bhavan, Varanasi.
Suka-Kridā: - *Suka-Kridā* or playing with the birds is mentioned as one of the most important past times of women. A fragmentary plaque from Mathurā, probably of the Kushāṇa period depicts this theme and a swan is seen to the right of the female.\(^{93}\)

Another female figurine probably of the Kushāṇa period from Mathurā now housed in the Baroda Museum depicts the same scene. A bird is perched on the left hand of the lady, possibly a parrot and it is pecking at the rubies in the necklace of the young lady. The specimen measures (5X5X1.3) cm.\(^{94}\)

Almost similar types of depictions have been found on the terracotta plaques found from Kausāmbi either from the Kushāṇa or Gupta period\(^ {95}\) and at Ahichchhatra\(^ {96}\) (Stratum V-VI-100B.C.-100A.D.) and Mathurā\(^ {97}\) from the pre-Kushāṇa /early Kushāṇa period.

Lilā-Kamala (Woman with lotus): - Sanskrit texts have numerous references to the woman-holding lotus and known as *Lilā-Kamala* (lotus sport). Mathura Museum possesses a number of such terracotta plaques of the Śuṅga and Kushāṇa period.\(^ {98}\)

Almost similar types of depictions have been found from plaques/figures of the pre-Kushāṇa period at Mathurā\(^ {99}\) and Gupta period at Ahichchhatra (Stratum IIId-A.D. 350-450).\(^ {100}\)

**Woman doing Toilet:** - Make-up (*prasādhana*) is an important daily routine of the women. Some terracotta plaques depicting toilet scenes have been found from the Mathurā region. One such plaque of the Kushāṇa period, now kept in the Mathura Museum depicts a lady seated on her settee, holding a mirror in her right hand and adjusting the headgear with her left hand.\(^ {101}\) (Pl. CXLVI)
A similar type of figure of the Kushāṇa period (1st century A.D.) from Mathurā is now kept in the collection of the State Museum, Lucknow. It is 11.4 cm in height.102 (Pl. CXLVII)

**Woman with Attendant:** - Plaques representing a lady with attendant have been found from the Kushāṇa period at Mathurā. Mathura Museum possesses such plaques with attendants either in the form of a boy holding some thing like a bowl (Pl. CXLVIII) or a female figure.103

Almost similar type of figure depicting a female attendant holding a mirror has been found from the contemporary Kushāṇa period at Ahichchhatra.104

**Mithuna/Dampati/Man and Woman/ Couple:** - Man and Woman or Mithuna or Dampati figures were found to be represented on a number of plaques from Mathurā, Ahichchhatra, Bhita, Kauśāmbī and Rājghāt.

A number of such plaques of the Śuṅga and Kushāṇa periods are now housed in the collection of the Mathura Museum. All these figures betray amorous poses. One plaque of the Kushāṇa period exhibits a male standing to the right of his partner and both have their right hands respectively on the shoulder of each other. The male is holding the hand of the woman on his shoulder.105 (Pl. CXLIX, 1) In another plaque (Pl. CXLIX, 2) of the Kushana period the woman is standing in *tribhāṅga* posture.106

Excavations at Sonkh have yielded at least five plaques depicting couples or Mithuna figures from the Kushāṇa period (Period V). The figurines are depicted as standing or in seated postures with either the male to the left or the woman to the left. The best representative specimens are described below-

1. Fragmentary hollow round plaque showing a couple has been unearthed from the Kushāṇa Period (Level 21) at Sonkh. The
obverse bears a headless but beautifully shaped couple with the male to the left. His raised right hand is placed near his chest and the left arm embraces the woman. Right arm of the female figure is kept behind the man. It is grey in colour and treated with red slip, 10.5 cm in diameter and 3.3 cm in depth. 107 (Pl. CXLIX, 3)

2. Fragment of the back portion of a seated couple figure has been unearthed from the Kushāṇa period (Level 18/17) at Sonkh. Heads, legs and the entire front part of the figure are missing. Back of the man is depicted to the right and woman to the left. The woman seems to sit on the left thigh of the man. It is made of double moulds, brown in colour and 5 cm in height. 108 (Pl. CXLIX, 4)

3. Fragment of a terracotta handle showing front and back portion of a couple standing under a tree. (Pl. CXLIX, 5) The woman stands to the left and the man to the right. Faces of both the figures are worn out. In raised right hand the women holds a flower on the shoulder. The male holds his right hand to his chest. It is made from double moulds and unearthed from the Kushāṇa period (Level 21) at Sonkh. It is red brown in colour with a height of 6.8 cm. 109

A number of such types of figures have been reported from the pre-Kushāṇa-Kushāṇa periods at Ahichchhatra110 (200 B.C.-100 A.D.) and Kauśāmbī111 and in the pre-Kushāṇa period at Mathurā.112 Besides, a few plaques of such types have been found from the Gupta periods at Ahichchhatra,113 Bhita114 and Rājgāh.115

**Bacchanalian Scenes:** Bacchanalian scenes (*Madhupaṇa*) are one of the most popular themes of ancient Indian art. Excavations at Sonkh have yielded a fragmentary plaque probably depicting a Bacchanalian scene. In the centre a female figure is kneeling on her left knee. To the right and left worn legs of the accompanying figures are visible. From the stylistic appearance and position of the woman it is almost similar to the famous
figure housed in the National Museum, New Delhi. Though it is an unstratified object, but on the stylistic consideration it is certainly of Kushāṇa origin. It is brown in colour, 5.3 cm in height and 7.7 cm in breadth.\textsuperscript{116}

Almost similar types of depictions have been found in the terracotta plaques of the Kushāṇa and Gupta periods at Kauśāmbī.\textsuperscript{117}

**Scenes of Amusements:** - A number of terracotta plaques depicting diverse themes on recreation and amusements, such as music and dance have also been found from different sites.

A few Kushāṇa plaques housed in the Mathura Museum depict dancing scenes. The female figures are stand in *tribhāṅga* pose, adorned with jewelled ornaments like earrings, necklaces, bracelets, girdles, anklets and dressed in transparent lower garments. Their one hand rests on the waist. (Pl.CL) In a fragmentary plaque from Mathurā, a man is shown dancing with two females.\textsuperscript{118} (Pl.CLI) On another plaque from Mathurā (now in the National Museum) a couple is sitting under two trees. The man has a harp and before them a woman is dancing.\textsuperscript{119}

Numerous plaques from Mathurā also depict the scenes of playing musical instruments. In one plaque of the Kushāṇa period (now in the Mathura Museum) a young man is seen playing the typical *Paṇchāsikha* harp.\textsuperscript{120} (Pl.CLII). In another plaque a standing male figure is seen playing the same instrument.\textsuperscript{121} (Pl. CLIII)

A fragmentary figure of a seated headless drummer has been unearthed from the Kushāṇa period (Level 17) at Sonkh. The drummer is beating a drum with both his hands. It is red brown in colour with a height of 8.6 cm.\textsuperscript{122}

Almost similar types of depictions have been found on plaques/figures of the pre-Kushāṇa period at Mathurā,\textsuperscript{123} and pre-Kushāṇa-Kushāṇa periods at Kauśāmbī.\textsuperscript{124}
**Children:** - Finely executed small figures of children were other famous representations of the Kushāṇa terracotta art of Mathurā. Two clay moulds and a plaque depicting a group of children have been reported from the Apsidal Temple No.2 at Sonkh. Stylistically these figures could be ascribable to the Kushāṇa period.

1. Clay mould shows one male figure with the hands in ṛṇjali mudrās in the center and parts of the bodies of two other figures, one on each side. This mould actually reflects a part of the group of children in the stone relief. The specimen is grey in colour, 9.4 cm in height, 5.6 cm in breadth and 2 cm in diameter.\(^{125}\) (Pl. CLIV, 1)

2. Clay mould with group of three smaller children. Other features are almost similar to the above mentioned specimen. It is 9.5 cm in height, 7.2 cm in breadth and 1.6 cm in diameter.\(^{126}\) (Pl. CLIV, 2)

3. Fragmentary terracotta plaque of rough texture with three figures of a group of four children. It is 6.3 cm in height, 6.4 cm in breadth and 1.9 cm in diameter.\(^{127}\) (Pl. CLIV, 3)

Baroda Museum possesses three figures of boys and a child’s head from Mathurā. All of them belonged to the Kushāṇa period. The best specimen is described below –

1. A child’s head with a plump, beaming countenance, which looks more charming because of the parting lips and the half closed eyes. The beauty is further enhanced by the thick mop of flowing hair on its head. It measures (3X2.5) cm.\(^{128}\)

**Princely Figures:** - A youthful princely figure dressed in grooved dhotī, mekhalā, utṭariya and a jewelled turban has been found from Period IV at Mathurā. The ornament on his body includes clusters of rings suspended from the ear and graiveyaka with rosettes. He holds an ornate sceptre like object with both the hands.\(^{129}\) (Pl. CLIV, 4)
**Warriors/Soldiers:** - Another important type is represented by the figures of warriors/soldiers. Mathurā excavations have yielded a figure of Śaka or Kushāṇa warrior from the Kushāṇa period (Period IV). The figure holds a long prāsa-parasu and a large and heavy shield of cane or bamboo. He is dressed with a low cap or turban, a long belted coat or cloak and heavy shoes. The ribbon tied around the neck probably holds the shield at the back.¹³⁰ (Pl. CLV, 1)

Excavations at Sonkh have yielded one head of a soldier with helmet. The weather worn condition enables us to recognize details of the face and headdress. The head has incised eyebrows, eyelids, and the upper part of the head looks like a helmet with vertical incised lines. It was unearthed from the Kushāṇa period (Level 18) at Sonkh. It is light brown in colour and 7.4 cm in height.¹³¹ (Pl. CLV, 2)

Two terracotta figures of Scythian soldiers from Mathurā are now housed in the collection of Baroda Museum. Both of them belonged to the Kushāṇa period. One specimen wears a peculiar conical cap and long sleeved coat (vārbāṇa). It measures (11X6.5X3.5) cm.¹³²

**Noblemen:** - Another important secular figure of the Kushāṇa period is the representation of Noblemen. Heads of noblemen of the Kushāṇa period from Mathurā bears Kirīṭamukuta.¹³³

Three heads of male figures probably of noblemen from Mathurā are now housed in the collection of Baroda Museum. All these belong to the Kushāṇa period. The best two specimens are described below-

1. The head of a male figurine or a Kushāṇa nobleman. The nose, eyes and eyebrows are completely worn out. The person wears a conical cap. It measures (5X2.5X2) cm.¹³⁴

2. Another specimen absolutely similar to the above one wears a slightly tilted cap. It measures (2.5X2) cm.¹³⁵

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**Horse Riders/Riders:** A bust of a male figure, probably of a rider unearthed from the Kushâna period (Level -21) at Sonkh. The figure wears a turban with bulging in the right, bejewelled with earrings and circular collar decorated with punched holes. His right arm is broken and the left upper arm bent forward. It is red in colour, treated with strong mica slip and 8 cm in height.136 (Pl. CLV, 3)

Another such specimen of 1st century A.D. from Mathurā is now kept in the Allahabad Museum. The figure depicts a man riding on a horse. Zigzag decorations on the back of the horse probably indicates a saddle cover. It is 12.3 cm in height.137

**Tribal Figures:** At least thirty seven terracotta figurines both male and female termed as ‘tribal figurines’ have been reported from various levels at Sonkh. While discussing on these figurines Hártal stated, “The divergence is caused by the simple fact that these terracottas have been formed by the people who were nor artists and, in a part, by children, and therefore represent figures which are individual products and in this sense unique. They are not “timeless” but embedded in the stream of everlasting activities century after century. Although presented here entirely according to their stratigraphic provenance these figures from Sonkh prove that a “Zeitgeist” is immanent even in such undeniably poor products”.138 At least twenty such figures of the Kushâna period have been unearthed from Sonkh. We can classify them into two categories: Male Figures and Female Figures.

Seven different types of female figures of the Kushâna period reported from Sonkh may be classified under this category. But due to diverse features it is very difficult to categorize them in any specific types. So, here we have just tried to describe the best specimens as reported in the excavation report.
1. Bust of a female figure with dominant nose has been unearthed from Level 22/21 at Sonkh. The eyes are applied as round patches, breasts and right arm are broken and the left arm lowered in bent position. It is grey brown in colour, treated with black slip and 6.6 cm in height.139 (Pl. CLVI, 1)

2. Bust of a female (Pl. CLVI, 2) with crudely shaped face has been unearthed from Level 22 at Sonkh. The nose is indicated as a deep cavity, eyes are as flat round dips and mouth as a large hole. The female wears one plain armlet and its stumpy arms are stretched out to the sides. It is brown in colour and 6.1 cm in height.140

3. Bust of a female figure with crude face has been unearthed from Level 21 at Sonkh. The figure is adorned with some sort of a diadem, a necklace consisting of round discs, an upavīṭa between the conspicuously applied breasts. It is brick - red in colour and 7.5 cm in height.141 (Pl. CLVI, 4)

4. Fragment of a handmade plaque showing a female figure has been unearthed from Level 19 at Sonkh. The right arm of the figure is bent, and the left arm is lowered to the hip. The figure is adorned with a necklace, girdle and shoulder dress marked by incised lines. Breasts and navel of the figure are pricked. It is red in colour and 11.4 cm in height.142 (Pl. CLVI, 3)

5. Mutilated seated figure of a female having pinched out face has been unearthed from Level 16 at Sonkh. The incised eyes, mouth and protruding ears of the figure showing a perforation near upper and lower edge. A necklace consisting of applied round pearls hangs down to the mutilated breasts. The arms and the legs are broken off, only traces of navel pit visible. It is brown in colour and 23 cm in height.143 (Pl. CLVI, 5)

6. Fragment of a terracotta plaque showing two female figures seated side by side and hand in hand has been unearthed from Level 16 at Sonkh. The figures are adorned with earrings, necklaces and
girdles. The legs are slightly bent and toes are marked by incisions. Perhaps it is a part of a Mātrikā panel. It is brick-red in colour and 19.5 cm in height.144 (Pl. CLVI, 6)

At least ten different types of male figures of the Kushāna period reported from Sonkh may be classified under this category. But due to the diverse features it is very difficult to categorize them in any specific type. So, here we have just tried to describe the best specimens as reported in the excavations report-

1. A seated grotesque male figure with broad cheeks, narrow forehead, huge dominating nose and appliqué right eye has been unearthed from Level 21(22) at Sonkh. The mouth is depicted as a triangular cavity with a moustache. The left lower arm is broken and the right arm bent forward to holds a round object decorated with punched circles (Shield?) in his hand. It is brown in colour and 8.7 cm in height.145 (Pl. CLVII, 1)

2. Fragment of a male figure, probably a rider bearing simple pinched out face and dominating nose has been unearthed from Level 20 at Sonkh. The figure is adorned with a turban like head dress. It is red in colour and 7.8 cm in height.146 (Pl. CLVII, 2)

3. A seated male (?) figure with appliqué eyelids and pricked pupils has been recovered from Level 19 at Sonkh. The left, lower right arm and bottom legs are broken. The figure is pot-bellied with a large navel-pit. It is red in colour and 21.8 cm in height.147 (Pl. CLVII, 3)

4. Fragment of the bust of a male figure with shaven head, protruding long ears, narrow forehead, sharp edged eye-brows, applied eyelids around incised eyeballs, pricked pupils and long dominating nose has been unearthed from Level 18/17 at Sonkh. At the left shoulder of the figure hangs a bulging object, probably a cloth. It is brown in colour and 6.5 cm in height.148 (Pl. CLVII, 4)
Besides these, three unique types of figures have been reported from the Kushāṇa level, which may not be classified under the above mentioned groups-

1. A crudely shaped *Ekamukhaliṅga* with eyelids smeared towards the sides, pricked pupils, nose indicated as a hole and an *upavīta* hanging from right to left on the *liṅga*-shaft has been unearthed from Level 20 at Sonkh. It is grey in colour and 10.8 cm in height.\textsuperscript{149} (Pl. CLVII, 5)

2. Another *Ekamukhaliṅga* with applied eyes and nose, incised mouth has been unearthed from Level 19 at Sonkh. It is red in colour and 5.2 cm in height.\textsuperscript{150} (Pl. CLVII, 6)

3. A crudely shaped head with horns of a ram has been recovered from Level 16 at Sonkh. It has incised eyelids, elevated eyeball, pricked pupils and protruding ears, the horns winding from the sides and behind towards the mouth. It is brick red in colour and 9.2 cm in height.\textsuperscript{151} (Pl. CLVII, 7)

Apart from the above mentioned non-religious figures, there are numerous miscellaneous figures and plaques of the Kushāṇa period found from the Mathurā region. Some best representative specimens are described below –

1. A mutilated torso depicting a seated young damsel found from Period IV at Mathurā.\textsuperscript{152} (Pl. CLVIII, 1)

2. A damaged plaque bearing the female figure with Śaka/Kushāṇa attire, dressed in *Kurtī*, *lahṅgā* and *dupattā* has been unearthed from Period IV at Mathurā.\textsuperscript{153} (Pl. CLVIII, 2)

3. A torso dressed in ornate belted-clock with a hawk in the left arm and a sword in the right hand has been reported from Period IV at Mathurā.\textsuperscript{154} (Pl. CLVIII, 3)
4. A torso of a seated male figurine having *yajnopavīta* (with amulet) across the left shoulder, long-beaded strings around the neck, dhoti in lower part of the body and heavy coiled *valayas* and *katakas* has been unearthed from the Kushāṇa period at Mathurā. This figure has a close affinity with the contemporary art of the Deccan.\(^{155}\) (Pl. CLVIII, 4)

5. A nude figure (Pl. CLIX, 1) having impression of Gandhāra art tradition has been recovered from the Kushāṇa period at Mathurā.\(^{156}\)

6. Some detached heads (with conical caps, helmets) especially the one wearing a helmet with protuberant knob have been reported from the Kushāṇa period at Mathurā.\(^{157}\) (Pl. CLIX, 2)

7. Some archaic types of heads have been found from the Kushāṇa period at Mathurā.\(^{158}\) (Pl. CLIX, 3)

8. A hand-modelled female bust with pierced eyes, incised eyelids and eyebrows has been unearthed from the Kushāṇa period (Level 22/21) at Sonkh. Hair-strands laid sideways with comb like ornament in the middle. The figure is adorned with ear-pendants and necklaces. It is red-brown in colour and 11.2 cm in height.\(^{159}\) (Pl. CLIX, 5)

9. A solid round plaque showing a ferocious lion over its prey on the obverse has been unearthed from Level 19 at Sonkh. On the shoulder the mane is incised in vertical lines. Two wild boars and an iguana are depicted along with the lion. On the reverse is shown a floral design consisting of twelve flowers sharing their four petals. It is brick-red in colour, 9 cm in diameter and 2 cm in depth.\(^{160}\) (Pl. CLIX, 4)

10. Fragment of an ogre figure has been unearthed from Level 20 at Sonkh. Head and shoulders of a frightful looking demon has wrinkled face, broad nose, goggle eyes and wide open mouth. To
the sides of his neck and head two arms are raised of a human figure pressed against the demons body. The head of the human figure seems to vanish in the mouth of the ogre. It is grey in colour and 6 cm in height.\textsuperscript{161} (Pl. CLIX, 6)

11. A Scythian face with twisted moustaches, beard and other foreign ethnic features, housed in the collection of the Mathura Museum.\textsuperscript{162}

12. A lady carrying a flywhisk resembles with the contemporary stone figures on the railing pillars is now housed in the collection of the Mathura Museum.\textsuperscript{163}

During our field works in the Mathurā region we have collected few fragmented pieces of hands and legs of terracotta human figures from the Kushāṇa occupational deposits scattered in and around Mathurā city.

**Animal Figures:**

A large number of terracotta animals such as elephants, bull, horses, rams, dogs, camels, deers, lions, rhinoceroses, snakes, buffalos, tortoises and birds have been found from the Mathurā region. Some of these figures are handmade, large in size and very coarsely manufactured. A number of fragmented animal figures have been unearthed from the Kushāṇa period at Mathurā.\textsuperscript{164} (Pl. CLX, 1) Excavations at Sonkh have also yielded altogether three hundred six animal figures and not less than four hundred fifty five tiny fragments including parts of legs, bodies, tails, trunks etc from various levels ranging from Period I to Period VIII. The frequency table clearly indicates that highest numbers (91) of animal figurines were reported from Period III, while fifty five animal figures belonged to the Kushāṇa period (Period V). Elephant was the favourite
animal during Period II, while horse became more frequent during Period III. In Period IV and V elephant and horse became very rare and they are represented by increasing numbers of humped bulls. The following chart shows numbers and types of terracotta animal figures reported from the Kushāṇa period at Sonkh:

<table>
<thead>
<tr>
<th>Animals</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humped bull</td>
<td>29</td>
</tr>
<tr>
<td>Bird</td>
<td>6</td>
</tr>
<tr>
<td>Elephant</td>
<td>4</td>
</tr>
<tr>
<td>Ram</td>
<td>3</td>
</tr>
<tr>
<td>Snake</td>
<td>3</td>
</tr>
<tr>
<td>Horse</td>
<td>1</td>
</tr>
<tr>
<td>Dog</td>
<td>1</td>
</tr>
<tr>
<td>Camel</td>
<td>1</td>
</tr>
<tr>
<td>Buffalo</td>
<td>1</td>
</tr>
<tr>
<td>Antelope</td>
<td>1</td>
</tr>
<tr>
<td>Indistinct</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

Chart. 6: Showing numbers of terracotta animal figurines reported from the Kushāṇa period at Sonkh

Besides these, ten more fragmentary animal figurines probably of the Kushāṇa origin have been reported from the Apsidal Temple-2 at Sonkh.

Mathura Museum also possesses some collection of animal figurines of the Kushāṇa period.
**Humped Bulls:** Altogether twenty-nine specimens of Humped bulls have been recovered from the Kushāṇa occupational period at Sonkh. The specimens are distinguished by various types of humps with heights ranging from 3.5 cm to 6 cm and lengths ranging between 4.3 cm and 7.65 cm. The best specimens are illustrated below –

1. Humped bull with small head and massive body has been unearthed from the Kushāṇa period (Level 21) at Sonkh. It is grey in colour, 4.2 cm in height and 5.4 cm in length.¹⁶⁷ (Pl. CLX, 2)

2. Small humped bull with pierced eyes and perforations through neck and hump has been found from the Kushāṇa period (Level 20) at Sonkh. It is brown in colour and 4.3 cm in length.¹⁶⁸ (Pl. CLX, 3)

3. Humped bull with perforated eyes having a length of 5 cm and a height of 4 cm has been reported from the Kushāṇa period (Level 16) at Sonkh. It is yellow-brown in colour.¹⁶⁹ (Pl. CLX, 4)

4. Humped bull with perforation for wheel axles instead of legs has been unearthed from Level 21 at Sonkh. It is dark grey in colour, 4.2 cm in height and 7.65 cm in length. (Pl. CLX, 5) The specimen could have been used as a toy cart.¹⁷⁰

5. Humped bull with perforated hump has been unearthed from Level 20 at Sonkh. It is brown in colour, 5.5 cm in height and 7.5 cm in length.¹⁷¹ (Pl. CLX, 6)

6. Humped bull with a height of 4.4 cm and length of 6.8 cm has been unearthed from Level 16 at Sonkh.¹⁷² (Pl. CLX, 7)

7. Humped bull with perforated mouth and neck has been reported from Level 21 at Sonkh. It is 3.5 cm in height and 6.1 cm in length and brown in colour. ¹⁷³ (Pl. CLX, 8)

Mathura Museum possesses a small humped bull bearing letters 'Śivasa' (of Śiva) on one side and a trident on the other.¹⁷⁴
**Birds:** - Six fragmentary bird specimens have been found from the Kushāṇa period at Sonkh. The specimens have lozenge shaped eyes or eyes with incised rings or eyes with incised circles. Height varies from 3.1 cm to 6.5 cm and length varies between 5.3 cm and 9.6 cm. Colour varies from brown to red. The selective specimens are illustrated below –

1. Fragment of a bird with extended wings has been unearthed from Period V (Level 21) at Sonkh. It is brown in colour, 5.6 cm in height and 9.2 cm in length.\(^{175}\) (Pl. CLXI, 9).

2. Head and neck portion of a bird with perforated eyes has been recovered from Period V (Level 21) at Sonkh. It is brown in colour and 5.7 cm in height.\(^{176}\) (Pl. CLXI, 10)

3. Head and neck portion of a bird with simply incised eyes has been unearthed from Period V (Level 16) at Sonkh. It is red in colour and 6.5 cm in height.\(^{177}\) (Pl. CLXI, 11)

Besides these, head and neck portion of a duck, which was probably used as a spout, has been reported from the Apsidal Temple 2 at Sonkh. It is red in colour and 9.6 cm in height.\(^{178}\) (Pl. CLXI, 12)

**Elephants:** - Four fragmentary specimens of elephants have been unearthed from the Kushāṇa period at Sonkh. Besides, one such specimen was also recovered from the Apsidal Temple No. 2. Colour of the specimens varies from red to brown. Height ranges from 5.7 cm to 9.4 cm, while length varies from 5.7 cm to 15.1 cm. The best representative specimens are illustrated below –

1. Fragment of an elephant unearthed from Level 18 at Sonkh. Bulgy part of the head raised like a hood with a perforation in the centre, eyes are circular with pallet, root-sheaths of the tusks are worn out. It is red in colour, but due to ill firing the colour became black. It is 7.3 cm in height and 12 cm in length.\(^{179}\) (Pl. CLXI, 13)
2. Fragment of an elephant has been unearthed from the Apsidal Temple No. 2 at Sonkh. The figure bears bulgy head, small rhomboid eyes, incised skin-folds and applied right ears. The trunk swings from left to right and root-sheaths of tusks are empty. It is brown in colour, 9.1 cm in height, 15.1 cm in length and 6.9 cm in breadth.\(^{180}\) (Pl. CLXI, 14)

3. Frontal part of an elephant with complete trunk has been unearthed from Level 20 at Sonkh. Like the above specimen the bulgy head stands upright with perforation in the centre, eyes are inserted as holes, ears stretched side wards and root-sheaths of tusks are worn out. It is dirty brown in colour and 9.4 cm in height.\(^{181}\) (Pl. CLXI, 15)

**Rams:** Three specimens of rams have been reported from the Kushāṇa occupational period and one from the Apsidal Temple No.2 at Sonkh. All the specimens are brown to red in colour; height varies from 4.8 cm to 8.5 cm and length ranges between 6 cm and 10.3 cm. The best representative specimens are illustrated below-

1. Fragment of a ram with mutilated head and remains of axle-holes in the legs has been reported from Period V (Level 21) at Sonkh. It is brown in colour with a height of 5 cm and length of 9.2 cm.\(^{182}\) (Pl. CLXII, 16)

2. Fragment of a ram with pricked eyes and remains of frontal legs has been unearthed from Level 18/16 at Sonkh. It is brown in colour, 8.5 cm in height and 10.3 cm in length.\(^{183}\) (Pl. CLXII, 17)

**Horses:** Single specimen of horse figure has been recovered from the Kushāṇa period at Sonkh. The specimen depicts head of a horse with arched neck, short ears, discs shaped eyes and slightly open mouth. It
has been unearthed from Level 21 at Sonkh. It is red in colour, 4 cm in height and 5.6 cm in length.\textsuperscript{184} (Pl. CLXII, 18)

**Buffalos:** Single specimen of buffalo has been reported from the Kushāṇa period (Level 21) at Sonkh. It is a large buffalo figure with prominent hump, slightly open mouth and punched circular eyes. Two legs of the figures are missing. It is red in colour, 16 cm in height and 18.5 cm in length.\textsuperscript{188} (Pl. CLXII, 19)

**Camels:** Single specimen of camel figure (Pl.C LXII, 20) has been recovered from the Kushāṇa period (Level 20) at Sonkh. It is a fragmentary portion of a head of a camel bearing slightly bent long neck, perforated eyes and ears applied as patches. It is red in colour and 5.7 cm in height.\textsuperscript{186}

**Antilopes:** Single specimen of antelope has been reported from the Kushāṇa period (Level 21) at Sonkh. The figure depicts head of an animal with broken horns and pierced eyes. It is grey-brown in colour and 2.7 cm in height.\textsuperscript{187} (Pl. CLXII, 21)

**Dogs:** Single specimen of a cheeky little dog with up turned head and ears, up right tail and perforated eyes has been unearthed from Level 16 at Sonkh. It is brown in colour, 5.5 cm in height and 5.5 cm in length.\textsuperscript{188} (Pl. CLXII, 22)

**Snakes:** Excavation at Sonkh has yielded altogether 4 snake figurines and 3 fragments of nāga/serpent hoods. The best representative specimens are illustrated below –
1. Head of a snake with round eyes and protruding eyeballs has been unearthed from the Apsidal Temple No. 2 at Sonkh. It is light brown in colour and measures (3.6 X 4.1 X 2.9) cm.\(^{189}\) (Pl. CLXII, 23)

2. Nāga hood of an originally seven-headed cobra has been reported from Level 19 at Sonkh. It is red in colour, 13.8 cm in height and 16.6 cm in breadth.\(^{190}\) (Pl. CLXII, 24)

A beautiful serpent hood of the Kushāṇa period with coils, lotus flowers and buds has been reported from Umari village, Mathurā.\(^{191}\) (Pl. CLXIII)

Besides, there are few unidentified animal figurines reported from the Kushāṇa occupational levels at Sonkh.

During our field survey in the Mathurā region, we have collected few fragmented animal figurines, probably of the Kushāṇa period in and around the Mathurā city. But due to their corroded condition, we are unable to identify these figures. (Pl. CLXIV)

Almost similar types of terracotta animal figures have been reported from the contemporary Kushāṇa periods at Bhita, Rajghat, Vaisali, Kumrahar, Kauśāmbi, Hastināpura and even at Taxila.\(^{192}\)

**OTHER TERRACOTTA OBJECTS:**

Other terracotta objects are also part of assemblages found from the Kushāṇa period in the Mathurā region. These include household objects like dabbers, reels, spindle whorls, skin rubbers, stoppers and ladles; game objects like wheels, toy-carts, discs, rattles, balls and gamesmen; ornamental objects like bangles, pendants and beads; ritualistic objects like votive tanks; miscellaneous objects like terracotta stamps, potters’ stamps, potter’s moulds, jewellery moulds, coin moulds, seals and sealings. Before analyzing the other terracotta objects/artefacts of the Mathurā region, it is to be noted that other terracotta objects of the Kushāṇa period is a poorly reported aspect of the
Mathura excavations and a few such objects were reported during excavations. Whereas, Sonkh could be treated as more informative so far as these objects are concerned. In the following pages we have tried to classify the other terracotta objects into different categories, on the basis of their morphological characters.

**Household Objects**

**Dabbers**: Dabbers of different sizes varying from 6cm to 10 cm in height have been reported during clearings at Govindnagar, in the western outskirts of Mathura city.\(^{193}\)

Altogether eighty-two specimens of complete and fragmented dabbers have been unearthed from excavations at Sonkh. They occurred from Mitra (Period III) to early medieval (Period VI) periods. Twenty-six such specimens of the Kushāṇa period are illustrated in the excavation report of Sonkh. On the basis of their morphological features we can classify the dabbers of the Kushāṇa period into following types –

**Type I** - This type has conical body and flat base. One such specimen has been unearthed from the early Kushāṇa level (Level 22/21) at Sonkh It is red in colour and 8.6 cm in height.\(^{194}\) (Pl. CLXV, 1)

**Type II** - This type has conical body, rounded base, constricted neck and flat knobbed handle. Sometimes they are decorated with incised vertical strokes on the body. One such specimen (Pl. CLXV, 2) unearthed from Level 21 at Sonkh is red in colour and 8 cm in height and 9.6 cm in diameter.\(^{195}\)

**Variant II a** – Variant IIa differs from the main type in having a thick knobbed handle with depression in the center. One such specimen
unearthed from Level 17 at Sonkh is grey in colour, 10.2 cm in diameter and 8.9 cm in height.196 (Pl. CLXV, 3)

**Variant II b** – Variant IIb differs from the above in having over hanging knobbed handle. One such specimen unearthed from the Level 17/16 at Sonkh is brown in colour, 7.5 cm in diameter and 6 cm in height.197 (Pl. CLXV, 4)

**Type III** – This type has mushroom shaped body with rounded sides and knobbed handle with drooping edges. One such specimen unearthed from Level 21 at Sonkh is dull in colour and 7.1 cm in height.198 (Pl. CLXV, 5)

**Variant III a** – Variant IIIa differs from the above in having wide neck. One such specimen recovered from Level 17/16 at Sonkh is 7.5 cm in diameter, 6.5 cm in height and treated with red wash.199 (Pl. CLXV, 6)

**Type IV** – This type has elongated body and thick knobbed handle with deep hole in the center of the knob. One such specimen unearthed from Level 16/15 at Sonkh is 7 cm in diameter, 6.6 cm in height and treated with brown wash.200 (Pl. CLXV, 7)

**Variant IV a** - Variant IVa differs from the main type in having rounded base and small knobbed handle without hole in the center. One such specimen unearthed from Level 20 at Sonkh is dull red in colour, 8.5 cm in height and 9.7 cm in diameter.201 (Pl. CLXV, 8)

**Type V** – This type has low body, knobbed handle and large deep hole in the center of the knob. One such specimen unearthed from Level 20 at Sonkh is dull red in colour, 6.5 cm in height and 6 cm in diameter. It is decorated with an incised rosette on top.202 (Pl. CLXV, 9)

**Variant V a** – Variant Va differs from the above in having a rounded base and high neck. One such specimen unearthed from Level 22/21 at Sonkh is brown in colour and 5.4 cm in height.203 (Pl. CLXV, 10)
Type VI - This type is of big size with rounded base, chamfered neck and knobbed handle. One such specimen (Pl. CLXV, 11) recovered from Level 22 at Sonkh is 12 cm in height, 15.3 cm in diameter and treated with brown wash.²⁰⁴

Type VII - This type is of small size with slim body, flat base and knobbed handle. One such specimen (Pl. CLXV, 12) unearthed from Level 22 at Sonkh is 5.6 cm in height, 4.8 cm in diameter and treated with brown wash.²⁰⁵

Apart from these usual types, an inscribed terracotta dabber with three aksaras around the conical body, reading bu [Kā] sa has been recovered from Level 22 at Sonkh. It is 9.3 cm in diameter, 7.7 cm in height and brown in colour.²⁰⁶

Mathura Museum also possesses an inscribed terracotta dabber with four letters in Kushāṇa Brāhmī giving the name of potter Kacchipa.²⁰⁷ (Pl. CLXVI)

During our field works in the Mathurā region we have collected a few terracotta dabbers (Pl. CLXVII, 1 and 2), probably of the Kushāṇa occupational period.

Skin-Rubbers: - In all eighty-six skin rubbers or fragments of such objects have been discovered from Periods II to V (Mauryan-Kushāṇa) at Sonkh. The skin rubbers are rectangular, round, or oblong pieces of clay studded with stones or roughened by grooves or holes on one side. All the pieces are well fired. They differ in shape and fabric from period to period.²⁰⁸

Excavation report of Sonkh has illustrated eighteen such skin rubbers unearthed from the Kushāṇa occupational period and two from
the Apsidal Temple No. 2. On the basis of their shapes we can classify
the skin rubbers of the Kushāna period into the following types –

Rectangular Skin Rubbers:

**Type I** – This type has roughened surface either with grooved parallel lines
or with grooved criss-cross lines. This type is represented by specimens
of different sizes. One such specimen unearthed from Level 21 at Sonkh
has grooved parallel lines on the one and sixteen irregularly distributed
holes on the other side. It measures (8.7 X 6) cm and dull red in colour.209
(Plate CLXVIII, 1). Another specimen unearthed from Level 21 at Sonkh has
grooved criss-cross lines. It measures (6.6X4.7X1.8) cm and grey in
colour.210 (Plate CLXVIII, 2)

**Type II** – This type has honeycombed surface on one side. One such
specimen unearthed from Level 20/19 at Sonkh is dull red in colour and
measures (9.8X6.8X2.2) cm.211 (Plate CLXVIII, 3)

**Type III** – This type has punctured surface on one side. One such
fragmented specimen unearthed from the Apsidal Temple No. 2 at Sonkh
is brown in colour and measures (6.1X4.2X1.5) cm.212 (Plate CLXVIII, 4)

**Type IV** – This type has impressed notches on the long sides for handling
the piece. One such specimen unearthed from Level 19 at Sonkh is dull
red in colour and measures (10.3X6.8) cm.213 (Plate CLXVIII, 5)
Round Skin Rubbers:

**Type I** – This type of rubbers are studded with pebbles. One such specimen recovered from Level 17 at Sonkh is 9.5 cm in diameter and light brown in colour.\(^{214}\) (Pl. CLXVIII, 6)

**Type II** – This type has a honeycombed surface. One such specimen unearthed from Level 21/20 at Sonkh is 9.5 cm in diameter and dull red in colour.\(^{215}\) (Pl. CLXVIII, 7)

**Type III** – This type has incised criss-cross patterns on one side. One such specimen recovered from the Apsidal Temple No. 2 measures (7.3X4.7X1.8) cm.\(^{216}\) (Pl. CLXVIII, 8)

Oblong Skin Rubbers:

**Type I** – This type has honeycombed surface on one side. One such specimen unearthed from Level 17 at Sonkh is 10.9 cm in length and dull red in colour.\(^{217}\) (Pl. CLXVIII, 9)

Almost similar types of skin rubbers have been reported from the contemporary Kushāṇa periods at Kauśāmbī (Sub-Periods V-VIII).\(^{218}\)

**Spindle Whorls:** - Altogether three hundred and twenty one spindle whorls of different shapes have been unearthed from Periods II to VIII (Mauryan to late Medieval) at Sonkh. But bulk of the materials comes from the Kushāṇa levels. One hundred and sixty two such specimens of the Kushāṇa period have been illustrated in the excavation report of Sonkh.\(^{219}\) On the basis of their shapes theses spindle whorls of the Kushāṇa period can be classified in to following types-
Vase-shaped spindle whorls:

**Type I** – This type has low rounded body and bevelled broad rim. One such specimen reported from Level 19 at Sonkh is red in colour, 1.1 cm in height and 1.8 cm in diameter.\(^\text{220}\) (Pl. CLXIX, 1)

*Variant I a* – Differs from the above in having thick rounded collar. One such specimen unearthed from Level 18 at Sonkh is light brown in colour, 1.4 cm in height and 1.8 cm in diameter.\(^\text{221}\) (Pl. CLXIX, 2)

**Type II** – This type has circular body and rounded collar. (Pl. CLXIX, 3)
Diameter varies between 1.7 cm and 3.2 cm. One such specimen from Level 18 at Sonkh is 2.2 cm in height, 2.5 cm in diameter and grey in colour.\(^\text{222}\)

*Variant II a* – Differs from the above in having narrow collar, constricted neck with sharp grooves around the shoulder. One such specimen unearthed from Level 16 at Sonkh is red in colour, 2.4 cm in height and 2.8 cm in diameter.\(^\text{223}\) (Pl. CLXIX, 4)

**Type III** – This type has an elongated body and rounded or high rounded collar. One such specimen unearthed from Level 20/19 is red in colour, 2.9 cm in height and 2.9 cm in diameter.\(^\text{224}\) (Pl. CLXIX, 5)

**Type IV** – This type has a flaring body, rounded collar and groove on inner edge. Diameter ranges between 1.7 cm and 2.3 cm. One such specimen unearthed from Level 19/18 is red in colour, 2.3 cm in diameter and 2 cm in height.\(^\text{225}\) (Pl. CLXIX, 6)

**Type V** – This type has a squattish body and rounded collar. One such specimen unearthed from Level 21 at Sonkh is grey in colour, 1.2 cm in height and 1.77 cm in diameter.\(^\text{226}\) (Pl. CLXIX, 7)
**Variant V a** - Differs from the above in having low and tapering squattish body and overhanging rounded rim. One such specimen unearthed from Level 20 at Sonkh is red in colour, 1.6 cm in diameter and 0.8 cm in height.\textsuperscript{227} (Pl. CLXIX, 8)

**Type VI** - This type has a short truncated conical body and broad beveled rim. Diameter ranges between 1.9 cm and 2.8 cm. One such specimen unearthed from Level 19 at Sonkh is red in colour, 1.9 cm in diameter and 1.3 cm in height.\textsuperscript{228} (Pl. CLXIX, 9)

**Areca nut shaped spindle whorls:**

**Type I** - This type has large depression on top and all over the body. Diameter ranges between 2.2 cm and 3.6 cm. One such specimen unearthed from Level 18 is brown in colour, 2.3 cm in diameter and 1.6 cm in height.\textsuperscript{229} (Pl. CLXIX, 10)

**Variant I a** - Differs from the above in having large and flat topped depression on top and grooves around shoulder, body or on edge. Diameter ranges between 2.1 cm and 3.5 cm. One such specimen unearthed from Level 19/18 is black in colour, 2.4 cm in diameter and 1.8 cm in height.\textsuperscript{230} (Pl. CLXIX, 11)

**Variant I b** - Differs from the main type in having large but shallow depression on top. Diameter ranges between 2.5 cm and 3.4 cm. One such specimen unearthed from Level 18 at Sonkh is black in colour, 3.4 cm in diameter and 2.2 cm in height.\textsuperscript{231} (Pl. CLXIX, 12)

**Variant I c** - Differs from the main type in having large and deep depression on top. Diameter varies from 2 cm to 3.3 cm. One such specimen unearthed from Level 19/18 at Sonkh is brown in colour, 2.5 cm in diameter and 1.6 cm in height.\textsuperscript{232} (Pl. CLXIX, 13)
Type II - This type has medium depression on top and grooves on shoulder. Diameter ranges between 2.5 cm and 3.2 cm. One such specimen unearthed from Level 21 at Sonkh is grey in colour, 2.2 cm in height and 2.7 cm in diameter.233 (Pl. CLXIX, 14)

Variant II a - Differs from the above in having medium but deep depression on top and with or without grooves. Diameter ranges between 2.1 cm and 3.7 cm. One such specimen (Pl. CLXIX, 15) unearthed from Level 18/17 at Sonkh is grey in colour, 2.5 cm in diameter and 1.9 cm in height.234

Variant II b - Differs from the main type in having medium but sharp concave depression on top and without any grooves. Diameter ranges between 1.7 cm and 3.2 cm. One such specimen unearthed from Level 21 at Sonkh is grey in colour, 2.6 cm in diameter and 2 cm in height.235 (Pl. CLXIX, 16)

Variant I c - Differs from the main type in having medium but flat depression on top and groove around neck. Diameter ranges between 2.7 cm and 3.0 cm. One such specimen recovered from Level 16 at Sonkh is black in colour, 3.0 cm in diameter and 2 cm in height.236 (Pl. CLXIX, 17)

Type III - This type has narrow depression on top. Diameter ranges between 2.3 cm and 3.5 cm. One such specimen unearthed from Level 18/17 at Sonkh is brown in colour, 3.1 cm in diameter and 2.1 cm in height.237 (Pl. CLXIX, 18)

Variant III a - Differs from the above in having narrow and deep depression on top. Diameter ranges from 2.1 cm to 2.6 cm. One specimen unearthed from Level 19/18 is brown in colour, 2.4 cm in diameter and 2.2 cm in height.238 (Pl. CLXIX, 19)

Spindle whorls have also been reported from the Kushāṇa period (Period IV) at Hastināpura.239
Reels: - Altogether forty-three terracotta reels have been unearthed during excavations at Sonkh. Although the materials were reported from the Mauryan to the Kushāṇa periods, but bulk of them came from the Kṣatrapa levels. All the reels are grey in colour and sometimes treated with black slip. We can classify terracotta reels of the Kushāṇa period into following types –

Decorated Reels – This type of reels is short, concave in shape and has concentric rings appearing on both flat ends. One such specimen unearthed from Level 21 at Sonkh is grey in colour, 3.1 cm in diameter and 1.3 cm in height. (PI. CLXX, 1)

Plain Reels – Single specimen (Pl. CLXX, 2) of such type has been unearthed from the Apsidal temple No.2 at Sonkh. It is short, concave in shape with flat sides. It is brown in colour, 3 cm in diameter and 1.7 cm in height.

Terracotta reels have also been reported from the Kushāṇa period at Hastināpur (Period IV).

Stoppers: - Two specimens of stoppers have been reported from the Kushāṇa period at Sonkh. One specimen of stopper with blossom shaped top and tapering shaft has been unearthed from the Apsidal Temple No. 2 at Sonkh. It is 5.85 cm in height and brown in colour. (Pl.CLXXI, 1) Another specimen with short conical stem and high knob with traces of incision on top has been found from Level 17 at Sonkh. It is 4.66 cm in height and grey in colour. (Pl. CLXXI, 2)

Terracotta stoppers have also been reported from the Kushāṇa period (Period IV) at Hastināpur.
Ladle: - Single specimen of ladle with plain handle has been unearthed from the Kushāṇa period (Level 16) at Sonkh. It is dull red in colour, 21 cm in length and 9.9 cm in diameter.247

Game Objects -

Terracotta Discs: - Altogether one hundred ninety-two terracotta discs have been discovered from Period I to Period VII at Sonkh. Among them 67 are plain discs and 125 are decorated discs. Sixty two terracotta discs of the Kushāṇa period have been illustrated in the excavation report of Sonkh.248 We can classify terracotta discs of the Kushāṇa period into following types –

Plain Discs - Plain discs are represented by twenty-three illustrated specimens. Diameter varies between 2.2 cm and 7.3 cm. One such plain disc unearthed from Kushāṇa period at Sonkh is brown in colour and 2.9 cm in diameter.249 (Pl. CLXXII, 1)

Decorated Discs - Decorated discs were represented by thirty-nine specimens and can be divided into the following types -

Type I - This type has thin/wide-set/irregular incised notches on the edges of the discs. Diameter varies from 2.5 cm to 6.5 cm. One such specimen unearthed from Level 18/17 at Sonkh has irregular notches, light brown in colour and 2.5 cm in diameter.250 (Pl. CLXXII, 2) Another specimen with thin notches, grey in colour, 3.8 cm in diameter has been unearthed from Level 20 at Sonkh.251 (Pl. CLXXII, 3). Another disc with wide set notches measuring 3.9 cm in diameter and grey-brown in colour has been unearthed from Level 16 at Sonkh. This specimen also bears painted black grid on either side of the plain surface.252 (Pl. CLXXII, 4)
Type II - This type has incisions or impressions of semi circles or crescents along the edges of the discs. Diameter ranges between 3.5 cm and 5.7 cm. One such disc unearthed from Level 18/17 at Sonkh has flatly incised crescents along the edges. It is red in colour and 5.7 cm in diameter.\(^{253}\) (Pl. CLXXII, 5) Another such specimen with deeply impressed semicircles along the edges has been unearthed from Level 16 at Sonkh. It is red in colour and 4.5 cm in diameter.\(^{254}\) (Pl. CLXXII, 6)

Type III - This type has individual incised designs on the plain surfaces. Diameter varies between 3.5 cm and 5.6 cm. One such specimen (Pl. CLXXII, 7) unearthed Level 16/15 at Sonkh has incised floral motif consisting of zigzag lines and dots. It is red in colour and 3.5 cm in diameter.\(^{255}\)

During our field survey in the Mathurā region we have collected few terracotta discs (Pl. CLXVII, 3) from the scattered Kushāṇa occupational deposits in and around Mathurā city.

Terracotta discs have been found from the Kushāṇa period (Period IV) at Hastināpura.\(^{256}\)

Terracotta Wheels: - Terracotta wheels of the Kushāṇa period at Mathurā include both plain and decorated varieties. But the decorations on the faces of the wheels were cruder in finish.\(^{257}\)

Altogether two hundred and ninety one terracotta wheels have been recovered from Periods II to VI at Sonkh. Among them two hundred forty seven specimens are plain and forty-four specimens are decorated. One hundred and nineteen such specimens from the Kushāṇa occupational period and two from the Apsidal Temple No. 2 have been illustrated in the excavation report of Sonkh. During the Kushāṇa phase
the decorations on terracotta wheels became clumsy and wheels with protruding axles became predominant at Sonkh.\textsuperscript{258} We can classify the terracotta wheels of the Kushāṇa period into the following types-

**Plain Wheels:**

**Type I** – This type has double convex wheels with protruding or prominent hubs on both sides. Diameter varies between 2.5 cm and 8.8 cm. One such specimen unearthed from Level 20 at Sonkh is grey in colour and 4.2 cm in diameter.\textsuperscript{259} (Pl. CLXXIII, 1)

**Type II** - This type has plano-convex wheels with small hub. Diameter varies between 3.4 cm and 6.6 cm. One such specimen (Pl. CLXXIII, 2) unearthed from Level 22/21 at Sonkh is 6.0 cm in diameter and brown in colour.\textsuperscript{260}

**Type III** – This type has lenticular wheels with diameter varying between 3.3 cm and 6.2 cm. One such specimen unearthed from Level 22 at Sonkh is brown in colour and 4.5 cm in diameter.\textsuperscript{261} (Pl. CLXXIII, 3)

**Type IV** – This type has big wheels with broad hub. One such specimen recovered from Level 20/19 at Sonkh is brown in colour and 8.8 cm in diameter.\textsuperscript{262} (Pl. CLXXIII, 4)

**Type V** – This type has wheels without hubs, probably used as spindle whorls. Diameter varies between 2.1 cm and 9.4 cm. One such specimen (Pl. CLXXIII, 5) unearthed from Level 18 is grey in colour and 2.1 cm in diameter.\textsuperscript{263}
Decorated Wheels:

Type I – This type has double convex wheels with protruding hubs. Clumsy incised strokes appear either on the obverse or on both the sides. One such specimen unearthed from Level 20 at Sonkh is brown in colour and 4.2 cm in diameter.264 (Pl. CLXXIII, 6)

Type II – This type has lenticular wheels with protruding hubs and incised strokes on the obverse. One such specimen unearthed from Level 19 at Sonkh is grey in colour and 3.4 cm in diameter.265 (Pl. CLXXIII, 7)

Type III – This type has plano-convex wheels with central hub encircled by punched holes. One such specimen unearthed from Level 20 at Sonkh is grey in colour and 4 cm in diameter.266 (Pl. CLXXIII, 8)

Type IV – This type has big wheels with protruding hubs on both sides and arbitrary semicircular impressions appearing along the edges. One such specimen recovered from Level 21/20 at Sonkh is 8 cm in diameter and colour varies between grey to brown.267 (Pl. CLXXIII, 9)

Almost similar types of terracotta wheels have been reported from the contemporary Kushāṇa period at Kauśāmbī268 (Sub-Periods V-VIII) and Hastināpura269 (Period IV).

Toy Carts: - Altogether forty-one fragments of toy carts have been discovered during excavations at Sonkh. They were found from the Śuṅga to the Kushāṇa periods and no such specimens have been reported from the post-Kushāṇa phase. The toy carts of the Kushāṇa period have simple constriction of carts with rows of holes in the platform for fixing the plank with the help of rods. Only seven fragments of toy carts hailed
from the Kushāṇa period have been illustrated in the excavation report of Sonkh.\textsuperscript{270}

Two specimens have eleven holes in the platform for fastening the rods and perforation in the middle for inserting the axle. One such specimen unearthed from Level 20/19 at Sonkh is brick red in colour and measures (8.1X5.7) cm.\textsuperscript{271} (Pl. CLXXIV, 1)

Five specimens have six vertical holes in the platform for fastening the rods. One such specimen recovered from Level 18 at Sonkh is brick red in colour, 1.6 cm in height and 3.2 cm length.\textsuperscript{272} (Pl. CLXXIV, 2)

Almost similar types of toy-carts have been found from the contemporary Kushāṇa period at Kauśāmbī\textsuperscript{273} (Sub-Periods V-VIII) and Hastināpura\textsuperscript{274} (Period IV).

**Terracotta Balls:** Terracotta balls have been recovered from both Mathurā and Sonkh. Altogether one hundred thirteen terracotta balls have been reported from Periods I to VIII at Sonkh. Among them seventy seven are plain balls and thirty-six are decorated balls. The balls are spherical or spheroid in shape and red, brown or grey in colours. The diameter ranges between 1.2 cm and 4.8 cm, but the bulk of the balls measure between 1.2 cm and 2.8 cm.\textsuperscript{275}

**Plain Balls** – During our documentation work at Purana Qila, New Delhi, I have studied few specimens of plain terracotta balls unearthed from Mathurā. All of them are fragmentary in nature and red in colour. They were reported from the Kushāṇa levels of MTR-2 and MTR-4.

Almost similar types of plain terracotta balls have been reported from different periods (Periods I-VIII) at Sonkh. One such specimen of the Kushāṇa period is irregularly spherical in shape and has uneven surface. It is red in colour and 1.7 cm in diameter.\textsuperscript{276} (Pl. CLXXV, 1)
Decorated Balls - Decorated balls have been reported from the Kushāṇa period at Mathurā and Sonkh. The best representative specimens are illustrated below –

1. Spherical terracotta ball with three impressed crescents on the smooth outer surface has been reported from the Kushāṇa period at MTR 6, Mathurā. It is dull red in colour with a diameter of 2.2 cm.

2. A spheroid ball decorated with eight slightly carved impressed grooves has been reported from Level 22 at Sonkh. It is red in colour, 2.8 cm in diameter.277 (Pl. CLXXV, 2)

3. A spherical ball decoratively divided into six sectors by deeply grooved lines has been reported from Level 22 at Sonkh. It is dull red in colour and 1.9 cm in diameter.278 (Pl. CLXXV, 3)

4. An irregular spherical ball decorated with crossing lines has been unearthed from Level 21/20 at Sonkh. It is grey in colour, 2.4 cm in diameter.279 (Pl. CLXXV, 4)

5. A spherical ball with four holes arranged in a square has been recovered from Level 20 at Sonkh. It is grey in colour and 2.4 cm in diameter.280 (Pl. CLXXV, 5)

6. An irregular spherical ball, decoratively divided into four sectors by punched lines of short notches has been reported from Level 20 at Sonkh. It is brown in colour and 2.5 cm in diameter.281 (Pl. CLXXV, 6)

7. A spherical ball (Pl. CLXXV, 7) with incised segmenting lines has been unearthed from Apsidal Temple No. 2 at Sonkh. It may be termed as melon shaped ball. It is 1.8 cm in diameter and brown in colour.282

Terracotta Gamesmen: - Terracotta gamesmen have been reported from various periods at Mathurā and Sonkh. Altogether one hundred...
gamesmen have been found from Mauryan to late medieval periods (Periods II-VIII) at Sonkh. We can classify the gamesmen of the Kushāṇa period into the following types –

**Geometrical Shapes** -

**Type I** – This type has a short cylindrical shape with a slight depression or flat top. One such specimen recovered from Level 16/15 at Sonkh is dull red in colour, 3.2 cm in diameter and 2.6 cm in height. (Pl. CLXXVI, 1)

**Type II** – This type has a long cylindrical shape with a slight depression on top. One such specimen unearthed from Level 21/20 at Sonkh is grey in colour, 1.6 cm in diameter and 3.6 cm in height. (Pl. CLXXVI, 2)

**Type III** - This type has a long conical shape. This type was first introduced in the Kushāṇa period at Sonkh. One such specimen recovered from Level 17/16 at Sonkh is 1.55 cm in diameter, 3.4 cm in height and treated with black slip. (Pl. CLXXVI, 3)

**New Shapes** -

**Type I** – This type has a conical stand and animal headed top. This type may also be termed as animal shaped gamesmen. One such specimen unearthed from Level 20 at Sonkh is black-slipped, 3.0 cm in height. (Pl. CLXXVI, 4) Animal shaped gamesmen have also been reported from the Kushāṇa period (Period IV) at Mathurā.
Type II - This type has dish on stand shape with indented rim. One such specimen recovered from Level 21 at Sonkh is grey in colour, 1.3 cm in diameter and 2.1 cm in height.²⁸⁹ (Pl. CLXXVI, 5)

Type III - This type has a reel shaped stand with high conical handle on top. One such specimen unearthed from Level 19 at Sonkh is dull red in colour, 2.6 cm in diameter and 2.9 cm in height.²⁹⁰ (Pl. CLXXVI, 6)

Type IV - This type has a vessel shape with conical lid. One such specimen unearthed from Level 18 at Sonkh is black in colour, 2.3 cm in diameter and 2 cm in height.²⁹¹ (Pl. CLXXVI, 7)

Type V - This type has a cone shape with rounded base and top. One such specimen recovered from Level 16 at Sonkh is red in colour, 1.9 cm in diameter and 1.6 cm in height.²⁹² (Pl. CLXXVI, 8).

Rattles: - Bird shaped rattles²⁹³ (Pl. CLXXVIII, 1) and a rattle bearing mangalya lanchhanas²⁹⁴ have been recovered from the Kushāṇa period at Mathurā.

Terracotta rattles have been found from Periods III to VII at Sonkh. But the report never mentioned the exact numerical value of such specimens unearthed from the Kushāṇa period. The best representative specimens of the Kushāṇa period are illustrated below –

1. Handle of a rattle, shaped like a half opened flower with separated petals has been reported from Level 20 at Sonkh. It is brown in colour and 5 cm in height.²⁹⁵ (Pl. CLXXVIII, 2)

2. Handle of a rattle shaped like a square parapet of a tower has been unearthed from Level 18/17 at Sonkh. There is a hole below the neck for inserting pebbles. It is dull red in colour and 6.4 cm in height.²⁹⁶ (Pl. CLXXVIII, 3)
3. Body part of a rattle with small hole for inserting pebbles has been recovered from Level 21 at Sonkh. It is dull red in colour and 6.2 cm in height.\textsuperscript{297} (Pl. CLXXVIII, 4)

Besides these, a beautifully decorated rattle (Pl. CLXXVIII, 5) has been reported from Level 21 at Sonkh. It is a mutilated round hollow plaque with a perforated triangular lug. On the rim there is a small hole for inserting pebbles. The obverse side depicts figures in whistling, clapping, singing and dancing postures. The reverse side shows the lotus decoration. It is grey in colour, 10.5 cm in diameter and 3.5 cm in depth.\textsuperscript{298}

Another hollow plaque with couple figure has been unearthed from Level 21 at Sonkh. The lug and hole are missing. This may also be used as a rattle. We have already mentioned this plaque in the discussion of Mithuna/Dampati figures.\textsuperscript{299}

One more rattle, almost similar to the above specimen is now kept in the collection of Cynthia Hazen Polsky, New York. It is a hollow plaque, depicts a Mithuna figure, moulded in high relief. The plaque contains a pellet, which indicates that it may be used as a rattle. It has been found from Mathurā and probably belonged to the Kushāṇa period (2\textsuperscript{nd} century A.D.). It is 10 cm in diameter.\textsuperscript{300}

Rattles have been reported from the Kushāṇa contemporary period at Kauśāṃbī (Sub-Period VIII).\textsuperscript{301}

**Ornamental Objects** -

**Terracotta Beads:** - Terracotta beads have been reported from Period I to Period IV at Mathurā. During the Kushāṇa period the \textit{ghaṭa} shaped beads of the earlier periods were totally replaced by the arecanut shaped beads.\textsuperscript{302}
During our documentation work at Purana Qila, New Delhi, I have studied at least twenty four terracotta beads of the Kushāṇa period unearthed from Mathurā. Most of them are short cone (arecanut) in shape and reported from various Kushāṇa levels at MTR 8. (Pl. CLXXIX) Colour of such beads varies between black and red. One such specimen has truncated short cone shape and rows of etching appear around the holes.

Altogether thirty nine terracotta beads have been found from different periods at Sonkh. Among them only nine beads were reported from the Kushāṇa period. These beads are represented by various shapes like - ellipsoid/ovoid (1), cylinder (1), bicone (1), prism rectangular (1), lenticular (1), toggle (1) etc.303

Different shapes of terracotta beads have been reported from the Kushāṇa contemporary period at Kauśāmbī (Sub-Periods V-VIII),304 Hastināpura (Period IV),305 Anichchhatra (Stratum V-VI),306 Taxila (Phases III-IV)307 and even at Shaikhan Dheri308 in the Swat Valley. The shapes more or less similar to that of Mathurā and Sonkh specimens are- Arecanut, cylindrical, biconical etc.

**Pendants:** - Mathurā excavations have yielded two beautiful terracotta pendants from the Kushāṇa period. One is a human shaped (female) pendant with charming headdress309 (Pl. CLXXX, 1) and another is a soldier shaped pendant.310 (Pl. CLXXX, 2)

A single specimen of terracotta pendant (Pl. CLXXX, 3) with long truncated cone and perforation near top end has been reported from the Kushāṇa period (Level 18/17) at Sonkh. It is 4.0 cm in height and grey in colour.311

**Bangles:** - Plain as well as decorated terracotta bangles have been reported from the Kushāṇa periods at Mathurā.312
Altogether sixty-five specimens of terracotta bangles have been unearthed from Period I-Period V at Sonkh. But with a few exceptions, most of them are fragile in nature. Single specimen of bangle of the Kushāṇa period is illustrated in the excavation report of Sonkh. It is fragmented in nature, flattish rectangular in section and moulded with one row of thick nodules between two ridges running along the circumference has been recovered from Level 22/21 at Sonkh. It is 2.7 cm in length, 1.3 cm in height and brown in colour. (Pl. CLXXX, 4)

Terracotta beads have also been reported from the contemporary Kushāṇa period at Kauśāmbi (Sub-Periods V-VIII) and Hastināpura (Period IV).

**Ritual Objects -**

**Votive Tanks:** - Votive tanks are usually a four-walled tank like enclosure with lamps at the four corners and bird perched on the walls, specially used for ritual purposes.

Excavations at Sonkh have yielded altogether two hundred sixty-six specimens of votive tanks from Period II-Period VII with larger concentration in the Mitra period (Period III). Most of the objects consist of small pieces like part of the tank wall with lamp or bird on the rim, with a ladder applied to the wall or of fragments of the tank bottom with the depiction of aquatic animals like snake, frog and fish or with remains of seated human figures.

Excavations at Mathurā have yielded votive tanks from the Kushāṇa period. (Pl. CLXXXI, 1) During our documentation work at Purana Qila, New Delhi we have studied a votive tank consisting of a ladder on the inner side of the wall. It is red in colour and was reported from the Kushāṇa levels at MTR 8, Mathura. (Pl. CLXXXI, 2)
The votive tanks of the Kushāṇa period at Sonkh were of a general type consisting of wheel thrown bowls with flat bases and grooved rims having aquatic animals like fishes, frogs, snakes on the bottom of the inside and lamp-cups on their rims. Sometimes seated human figures were found on the opposite of the enclosure.

Altogether thirteen specimens of votive tanks of the Kushāṇa period are illustrated in the excavation report of Sonkh. All the specimens are red or brick red in colour. One such specimen unearthed from Level 20 at Sonkh has four birds on the rim and a snake, frog, fish on the bottom of the tank. It is wheel made, brick red in colour and 29.8 cm in diameter.\textsuperscript{319} (Pl. CLXXXI, 3) Another specimen (Pl. CLXXXI, 4) unearthed from Level 21 at Sonkh has four seated figures in rows of two on opposite sides of the enclosure. It is brown in colour and measures \((23\times18\times4.5)\) cm.\textsuperscript{320}

Almost identical votive tanks have been reported from the Kushāṇa contemporary period at Kausāmbi\textsuperscript{321} (Periods V-VIII), Ahichchhatra\textsuperscript{322} (Stratums IV-V), Hastināpura (Period IV)\textsuperscript{323} and Taxila\textsuperscript{324}.

**Miscellaneous Objects**

**Terracotta Stamps:** A terracotta stamp engraved with a stylized peacock has been unearthed from the Kushāṇa period at Mathurā.\textsuperscript{325}

A large stamp with knob-shaped handle has been reported from the Apsidal Temple 2 at Sonkh. It bears three decorated concentric rings encircled with lotus rosettes. It is 11.6 cm in diameter, 3 cm in height and brick red in colour.\textsuperscript{326} (Pl. CLXXVII)

**Coin Moulds, Potters moulds, Potters stamps, Jewellery moulds and Seals and sealings:** These objects are used for various purposes and have been discussed in the respective chapters/sections.
From the above discussion on terracotta objects we have made some following observations:

1. The above information is very brief in nature as there are lots of such objects found from this region. Brief reports of Mathurā excavations never mentioned about the statistical information of such objects unearthed from the Kushāṇa period. The Excavations report of Sonkh stated about the total numbers of such objects unearthed from various phases, rather than numerical strength of a particular period.

2. In the excavation reports as well as in the catalogues of different museum collections, the specimens having artistic value received prominence in the discussion of terracotta objects and they throw little light on other terracotta objects of household/domestic values, whereas, we have plenty of such objects reported from the Kushāṇa period at Sonkh.

3. Terracotta sculptures consist of both human and animal figures. Human figures include representations of gods and goddesses of different pantheons like Durgā, Mahishāsuramardini, Kubera, Gaṅgā, Gaja Lakṣmī, Vasudhārā, Kāmadeva, Kṛṣṇa, Surya, Śiva, Bodhisattva and other deities like Mātṛikās, Yaksha and Yakshis, Nāgas, Gaṇas, Kubera and Hārīti and Vāmanakas. Besides, there are some non-religious figures/themes like Mother and child Śālabhañjikās, Suka-Kṛśā, Lilā-Kamala, Women doing toilet, Women with attendant, Mithuna figures, Children, Scenes of amusements, Bacchanalian scenes, noblemen, princely figures, soldiers, horse riders, tribal figures etc. Among the animal figures, depictions of elephants, horses, humped bulls, birds, snakes, buffalos, rams, tigers, fishes were important.
4. Lesser numbers of Buddhist and Jaina elements in terracotta art certainly contradicts with the abundance of Buddhist and Jaina images in forms of stone sculptures.

5. Our analysis reveals an overlapping situation of continuity of certain terracotta sculptures from the earlier to the later periods. Most of the themes depicted in the terracotta sculptures of the Kushāṇa period were found to be continued from the earlier phases. But it is not always possible to detect the processes of transformation of style and execution of the terracotta figurines. Joshi and Margabandhu opined that handmade figurines with appliqué decorations appeared in the Kushāṇa period at Mathurā in continuation of the terracotta art tradition of Period III. Similarly, the group of figures represented by riders and Dampati or Mithuna probably originated in Period III at Sonkh and continued up to the Kushāṇa period. The solid or hollow big-seated figurines and the figures with pierced eyes, incised eyelids and pricked pupil of the Kushāṇa period at Sonkh may have been continued from the art tradition of Period IV (Kṣatrapa period).

6. Some non-religious human figures from Mathurā have various types of head-dresses like helmets, turbans, conical caps etc. These features may indicate some foreign influence (probably the Śaka-Scythian/Śaka-Parthian influence) on the terracotta sculptures of this region. In this context we should mention that, a detached head from Mathurā with conical headdress is more or less comparable to the specimens found from Taxila (Sirkap). These types of head-dress were also known from the Parthain city of Seleucia in the contemporary strata (100B.C.-200A.D.). The lion image from the Kushāṇa period at Sonkh probably had an indirect influence of the Śaka-Scythian tradition as visible in their prominently curved chest, hairy manes and curled tails.
7. Other terracotta objects include household objects like dabbers, reels, spindle whorls, skin rubbers, stoppers and ladles; game objects like terracotta wheels, toy-carts, discs, rattles, terracotta balls and gamesmen; ornamental objects like terracotta bangles, beads and pendants; ritualistic objects like votive tanks and some miscellaneous objects.

8. Our study reveals that some other terracotta objects of the Kushāṇa period show a continuation of the earlier traditions since the PGW period, which in few cases also continued up to the post-Kushāṇa periods. Dabbers found to be continued from Period III at Sonkh. Skin rubbers probably continued from Period II at Sonkh. Plain and decorated reels are found to have continued from Period II at Sonkh. Vase and arecanut shaped spindle whorls are found to have been continued from Period II at Sonkh. Terracotta wheels are found to have been continued from Period II at Sonkh and from Period I at Mathurā. Toy-carts continued from Period III at Sonkh. Terracotta discs continued from Period I at Sonkh. Gamesmen found to be continued from Period II at Sonkh. In continuation of the earlier geometric shapes, some new types of gamesmen also appeared in the Kushāṇa period. At Mathurā Gamesmen continued from Period I. Rattles continued from Period III at Sonkh. Plain and decorated terracotta balls found to have continued from Period I at Sonkh. Terracotta bangles continued from Period I at Sonkh and from Period II at Mathurā. Terracotta beads found to be continued from Period I at Mathurā and from Period II at Sonkh. At Mathurā, ghāṭa shaped terracotta beads of Period I, II and III were totally replaced by the arecanut shaped beads in the Kushāṇa period (Period IV). Votive tanks are found to have continued from Period II at Sonkh.
In continuation of the terracotta traditions of the Kushāṇa period, few objects like dabbers, spindle whorls, terracotta wheels, terracotta balls, rattles, gamesmen, discs, terracotta beads and votive tanks found to have occurred in the post-Kushāṇa periods (Periods VI-VIII) at Sonkh.

9. Almost similar types of terracotta sculptures have been found from the pre-Kushāṇa-Kushāṇa-post-Kushāṇa periods at Kauśāmbī, Ahichchhatra, Hastināpura and other sites of the Ganga Valley. Besides, identical other terracotta objects have been found from the contemporary period at Kauśāmbī, Ahichchhatra, Hastināpura and Taxila. This may indicate the extension of a similar tradition exhibited at other centres of the Ganga Valley and north-western provinces.

**METAL OBJECTS:**

This section contains the documentation of metal objects/artefacts recovered from Mathurā and its surrounding regions generally during the Kushāṇa period.

Before analyzing the metal objects/artefacts of the Mathurā region, it is to be noted that metal objects of the Kushāṇa period is a poorly reported aspect of the Mathurā excavations and a few copper and iron objects were reported during excavations.332 Whereas, Sonkh could be treated as more informative so far as the metal objects is concerned. Altogether five hundred seventy one metal objects were unearthed from different occupational periods at Sonkh. The objects/ artefacts were mainly made of copper, iron, brass, lead and bronze. Copper and iron appeared through all the periods at Sonkh, whereas objects of lead, brass and bronze occurred from Period III onwards. A few gold objects have also been found from the Apsidal Temple No. 2 at Sonkh.333 These
objects were mainly used as household, ornamental, hunting tools, game objects and miscellaneous objects.

The documentation essentially follows the morphological descriptions of the metal objects of the Kushāṇa period reported from Mathurā and Sonkh.

**COPPER OBJECTS**:  

We have meagre information regarding the numerical strength of copper objects/artefacts found from the Kushāṇa period at Mathurā and Sonkh. Copper objects include ornamental objects like antimony rods, bangles, rings, beads, toe-ring, pendant etc; household object like pins; game object like cart and a few indeterminate objects.

The following is a brief typological classification of copper objects/artefacts unearthed from the Kushāṇa period at Mathurā and as well as Sonkh.

**Ornamental Objects -**

**Antimony Rods:** - Antimony rods have been found from the Kushāṇa period at Mathurā, but unfortunately we do not have any information about the shapes or measurements of these objects.334 Eleven specimens of antimony rods unearthed from the Kushāṇa period (Period V) have been illustrated in the excavation report of Sonkh. All the specimens have more or less similar shapes with rounded and thickened ends. One such specimen is 8.8 cm in length and unearthed from Levels 17 /16 at Sonkh. (Pl. CLXXXII, 1).335

Copper antimony rods have been reported from contemporary periods at Taxila336 (Phase IV) and Hastināpura337 (Period IV). Hastināpura specimens have rounded sections and thickened ends as
like Sonkh specimens. Excavations at Shaikhan Dheri have yielded copper antimony rods with club ends from the contemporary Kushâna levels. Similar types of antimony rods have been found from the pre-Kushâna period (Kṣatrapa period) (Level 23) at Sonkh.

**Bangles:** - Three specimens of bangles unearthed from the Kushâna period have been illustrated in the excavation report of Sonkh (Period V). These bangles can be divided into three different types. The first type has one decorated and intersected end, second type has thick curled end and third type has flat-topped club shaped end. The first type is represented by a specimen unearthed from Level 21. It has a diameter of 4.7 cm. (Pl. CLXXXII, 2) The second type is represented by a specimen discovered from the same Level having a length of 4.5 cm (Pl. CLXXXII, 3) and the third type is represented by a bangle having a length of 4.4 cm unearthed from Level 20 at Sonkh. (Pl. CLXXXII, 4) No copper bangles have been reported from the Kushâna period at Mathura.

**Rings:** - Two types of copper rings have been found from the Kushâna period (Period V) at Sonkh. One type has flat section and second type has plano-convex section. First type is represented by a specimen unearthed from Level 17 and has a diameter of 2 cm. (Pl. CLXXXII, 5) The second type is represented by a specimen having a diameter of 2.1 cm and unearthed from Level 20. (Pl. CLXXXII, 6). The outside of this ring is decorated with a garland like coiled band. No copper rings have been reported from the Kushâna period at Mathurā.

Copper rings have been reported from the Kushâna contemporary period (Period IV) at Hastinâpura and Kauśâmbî (Sub-Period V). Hastinâpura specimens are circular, rectangular and triangular in section. Here we should mention that, copper rings with circular cross-
section have been found from the pre-Kushāṇa period (Kṣatrapa) period (Level 24) at Sonkh.347

**Beads:** A few copper beads have been reported from the Kushāṇa period at Mathurā.348 But the exact numerical figure is absent. All together sixteen copper beads have been found from Sonkh. But unfortunately, not a single piece of copper bead has been reported from the Kushāṇa period.349

Copper beads have been found from the contemporary Kushāṇa periods at Hastināpura350 (Period IV), Kauśāṃbi351 (Sub-Periods VI-VIII) and Ahichchhatra352 (Startum V).

**Toe Ring:** An ornamental object, which excavators like to identify as toe-ring or mounting (with decoration) having a length of 7.4 cm has been discovered from the Kushāṇa period (Level 17/16) at Sonkh.353 (Pl. CLXXXII, 7) Excavators are doubtful about the metal used for preparing this ornament. Probably it was made of copper or of bronze.

Besides these, nail-parers of copper have been reported from the Kushāṇa period (Period IV) at Mathurā.354 But we do not have any information regarding the shapes of this object.

**Household Objects -**

**Pins:** Pins made of copper have been reported from the Kushāṇa period (Period IV) at Mathurā.355 But the detail information is very much absent. Nine specimens of pin were reported from the Kushāṇa period (Level 19/18) at Sonkh. One such specimen has pointed and thickened ends. It is 16.3 cm in length.356 (Pl. CLXXXII, 9) Due to an almost similar shape, it may be identified as antimony rod.

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A Copper pin with both pointed ends has been found from the contemporary Kushāṇa phase (Phase III) at Taxila (Sirkap).\textsuperscript{357}

**Game Objects -**

**Cart:** - Fragment of a cart made of copper has been found from the Kushāṇa period (Level 22) at Sonkh. It is corroded in nature; only the axle, bottom and part of right and left railing are remaining. The specimen measures (11.5x6.1x2.8) cm.\textsuperscript{358} (Pl. CLXXXII, 10)

**Indeterminate Objects -**

1. A thin circular disc with a hole near the edge has been reported from the Kushāṇa period (Level 18) at Sonkh. It is 1.5 cm in diameter. (Pl. CLXXXII, 8).\textsuperscript{359} It is our assumption that the object may be identified as an ornamental object, probably used as a pendant.

2. An indeterminate object having irregular shape with hole at the left has been unearthed from the Kushāṇa period (Level 19) at Sonkh. It measures (2.1x1.9x1.2) cm.\textsuperscript{360} (Pl. CLXXXII, 11)

The raw materials for these copper artefacts have been procured from different sources. There are copper mines with evidences of old workings in Rajasthan. The most important among these is the Khetri copper mines in Jhunjhunu district. H.C. Bharadwaj has listed nineteen ancient copper mines in Rajasthan. The important mines mentioned in this list are- Agar, Birat, Baldeogarh, Bhagoni, Dariba, Jodhawas, Nalladeshwar in the Alwar district; Mawaika Poora in the Bharatpur district; Bidasar in the Bikaner district; Baleshwar in the Jaipur district;
Bagor, Ajitsagar, Akwali, Gurha, Khetri copper belt between Singhana and Baba, Dhanaota in the district of Jhunjhunu; Nathoka in the Sikar; Chanpura, Dariba in the district of Udaipur. K.T.M. Hegde carried out a survey in the Aravalli Hills and reported six ancient copper ore mining and smelting sites extending over a thousand Kilometers. These are Khetri and Kho Dariba in the northeastern part, Kankaria and Piplawas in the central part, and Deri and Ambaji in the southwestern part.

Later, in 1981 eight major copper belts were reported by the Geological Survey of India. These major belts are in the Jhunjhunu district (Khetri deposit), Sikar district (Nim-ka-Thana belt), Alwar and Jaipur districts (Alwar-Jaipur belt), Bharatpur district (Lalsot-Nithor-Khansera belt), Bhilwara district (Devpura-Banera, Pur-Dariba, kalahudi-Bethumni zone and Gurla), Chittorgarh district (Jasma-Rewara-Karor belt, Bhopalsagar-Akola zone), Banswara district, Udaipur district (Delawara belt) and Dungarpur district (Dungarpur zone and Amjhara). There are also some detached copper occurrences in Pali, Sirohi, Udaipur, Churu, and Nagaur. Rajpur-Dariba mines were exploited from 375 B.C to 110 A.D. and Zawar mines were exploited from 430 B.C to 60 A.D. and so on. In the Deri mines mining activities commenced from 2nd century B.C. and continued till 4th century A.D. So, raw materials for making copper objects must have been brought from the neighbourhood regions of Rajasthan, mainly from the copper mines in the districts of Alwar and Bharatpur.

**IRON OBJECTS:**

Iron objects have been reported from the Kushāna period at Mathurā (Pl. CLXXXIII) and Sonkh. Iron objects include hunting tools like arrowheads and spearheads; household objects like knives, clamps, sickles, angular hooks, ladles, snaffle bits and nails; game objects like
rattle bell; ornamental objects like ear-rings and foot-rings; miscellaneous objects like iron straps and iron tubes.

The following is a brief typological classification of iron objects/artifacts unearthed from Kushāṇa period at Sonkh and Mathurā.

**Hunting Tools** -

**Arrowheads**: Two types of arrowheads have been reported from the Kushāṇa period at Sonkh. They are i) socketed and ii) tanged. Two varieties of socketed arrowheads have been found- i) triangular shape and ii) barbed shape. First variety is represented by a specimen unearthed from Level 17 having a length of 10.1 cm. (Pl. CLXXXIV, 1) Second variety is represented by two specimens having a length of 7.9 cm and 8.4 cm respectively. Both the specimens have been discovered from the Level 16 at Sonkh. (Pl. CLXXXIV, 2 and 3) Two varieties of tanged arrowheads have been reported from Kushāṇa period- i) lanceolate shape and ii) three-edged arrowhead. Three specimens represent the first variety. Such two specimens have a length of 6.1 cm and 10.6 cm respectively and unearthed from Level 20 and 19 at Sonkh. (Pl. CLXXXIV, 4 and 5) Second variety is represented by a single specimen unearthed from Level 20/19 having a length of 6.2 cm. (Pl. CLXXXIV, 6) The tang part is missing in this specimen. Iron arrowheads have been found from the Kushāṇa period at Mathurā. But no detail information is available about the shape of these objects. But it is not improbable to suppose that arrowheads of Mathurā had a close resemblance with the shape found from the Kushāṇa period at Sonkh.

Iron arrowheads have been found from the Kushāṇa contemporary periods at Taxila and Shaikhan Dheri in the Swat valley. A three-edged arrowhead from Taxila (between Phases I and II) is almost comparable to the specimen from Sonkh. Excavations at Hastināpura
have also yielded tanged and socketed arrowheads from the pre-Kushāṇa (Period III) period.

**Spearheads:** - Two types of spearheads have been reported from the Kushāṇa period at Sonkh. They are- i) tanged and ii) socketed. Tanged spearheads were represented by eight specimens. One such specimen unearthed from Level 18 at Sonkh is lanceolate in shape and has a length of 18.2 cm.372 (Pl. CLXXXIV, 7) Socketed spearhead was represented by a single specimen. It is 22.9 cm in length and discovered from Level 16 at Sonkh.373 (Pl. CLXXXIV, 8) Spearheads have been found from the Kushāṇa period at Mathurā.374 But detail information about these materials is absent. It is not impossible to suppose that spearheads of Mathurā had a close resemblance with the shape found from the Kushāṇa period at Sonkh.

**Household Objects -**

**Knives:** - Knives have been discovered from the Kushāṇa period at Mathurā (Period IV). But we have no information about the shape or measurement of such objects.375 Fragment of a knife, probably main part of the blade has been recovered from the Kushāṇa period (Level 21) at Sonkh. It is 10.6 cm in length.376 (Pl. CLXXXIV, 9)

Iron knives have been reported from the Kushāṇa contemporary periods at Taxila377 (Phase IV) and Shaikhan Dheri378 in the Swat valley.

**Clamps/Staples/Shackles:** - Clamps have been reported from the Kushāṇa period at Mathurā.379 But unfortunately, detail information is absent about such objects. Three iron clamps of the Kushāṇa period have been illustrated in the excavation report of Sonkh. Out of which, two specimens have short prongs and another has long prongs. One such
specimen with long prongs unearthed from Level 18/17 at Sonkh is 7.0 cm in length and 6.1 cm in width.\textsuperscript{380} (Pl. CLXXXIV, 10) Excavators also like to identify these specimens as staples. Besides, another type of clamp (also referred as shackle or fitting) has been recovered from Level 20 at Sonkh has a diameter of 12 cm and a height of 6.5 cm.\textsuperscript{381} (Pl. CLXXXIV, 11)

**Sickle:** - Eight specimens of iron sickles discovered from the Kushāṇa period have been listed in the excavation report. One such sample (Pl. CLXXXIV, 12) measures (17.3x14.5) cm and found from Level 19/18 at Sonkh.\textsuperscript{382}

**Angular hooks:** - Seven angular hooks found from the Kushāṇa period have been reported in the excavation report of Sonkh. One such specimen (Pl. CLXXXIV, 13) unearthed from Level 21 at Sonkh measures (4.6x2.2) cm.\textsuperscript{383}

**Ladles:** - Two specimens of ladles found from the Kushāṇa period have been reported in the excavation report of Sonkh. Fragment of one such ladle has been unearthed from Level 23/22 at Sonkh. The stem portion of this specimen is missing and it has a diameter of 5.1 cm and a height of 4.7cm.\textsuperscript{384} (Pl. CLXXXIV, 14)

Iron ladles have been reported from the Kushāṇa contemporary periods at Kauśāṁbi and Shaikhan Dheri\textsuperscript{385} in the Swat Valley. A ladle reported from Sub-Period VII at Kauśāṁbi\textsuperscript{386} is almost similar to the specimen unearthed from the Kushāṇa period at Sonkh.

**Mounting:** - A mounting (Pl. CLXXXIV, 15) with a measurement of (8x3.3) cm has been unearthed from the Kushāṇa period (Level 18/17) at Sonkh.\textsuperscript{387}
Snaffle Bits: - Two specimens of snaffle bits have been reported from Kushāṇa period at Sonkh. One such specimen having short stem, big loop at one end and small loop at the other end has been recovered from Level 22 at Sonkh. It is 10.8 cm in length and 6.6 cm in width. According to the excavators this specimen has a close resembles with modern beer-bottle opener.388 (Pl. CLXXXIV, 16)

Besides, iron nails have been reported from the Kushāṇa period at Mathurā.389 Iron nails have also been reported from the contemporary Kushāṇa period at Kauśāmbi390 (Sub-Period VI-VIII), Hastināpura391 (Period IV), Taxila392 (Phases III-IV) and Shaikhan Dherī393 in the Swat Valley.

Game Objects -

Rattle bell: - A rattle bell of iron has been found from the Kushāṇa period (Level 18) at Sonkh. It is globular in shape and a loop present on the top. It is 6.5 cm in diameter and 5.7 cm in height.394 (Pl. CLXXXIV, 17)

Ornamental Objects -

Ear-pendant/ring: - An ear-ring (Pl. CLXXXIV, 18) has been reported from the Kushāṇa period (Level 22) at Sonkh. The specimens measures (3.1x2.3) cm.395

Foot-ring: - A foot-ring having flat section and hinge has been recovered from the Kushāṇa period (Level 20) at Sonkh. It is 9.5 cm and 5.8 cm in height.396 (Pl. CLXXXIV, 19)
Miscellaneous Objects -

**Tube:** - Altogether four pieces of iron tubes have been found from the Kushāṇa period at Sonkh. One such specimen with pronged one end has been recovered from Level 20 at Sonkh. It is 2.3 cm in diameter and 8.4 cm in length.\(^{397}\) (Pl. CLXXXIV, 20)

**Iron straps:** - Altogether seven pieces of iron straps have been reported from the Kushāṇa period at Sonkh. One such piece measures (33.4x4.1) cm.\(^{398}\) (Pl. CLXXXIV, 21)

The raw materials in forms of iron ores must have been brought from the Aravalli tract of Rajasthan or from the Uttar Pradesh Himalayas.\(^{399}\) The iron mines in the state of Uttar Pradesh are situated in the high altitude areas of Kangra, Mandi, Sirmur, Kulu, Nainital, Almorah and Garhwal. There are several iron mines with evidences of old workings in Rajasthan. These mines are reported from the districts of Alwar, Jaipur, Udaipur, Ajmer, Bharatpur, Bundi, Jodhpur and Kota.\(^{400}\)

**BRASS OBJECTS:**

Brass objects first occurred during Period III and continued up to Period VIII at Sonkh. Brass was mainly used for making ornamental objects such as bracelets, rings, bangles etc. Only two brass objects have been reported from the Kushāṇa period at Sonkh. One is a small bowl-lid with central conical knob unearthed from Level 20 at Sonkh. It is 3.5 cm in diameter and 0.7 cm in height.\(^{401}\) (Pl. CLXXXV, 1) Another is a conical object with capstan shaped base and slender cone with spiral grooves running up to the point, unearthed from Level 20 at Sonkh. It has a
diameter of 2.1 cm and a height of 5.2 cm. It may be identified as an ear-stud.\textsuperscript{402} (Pl. CLXXXV, 2)

The raw materials required for making brass objects must have been brought from the neighbouring regions. Zinc was probably brought from Zawar, Ajmer, Jahazpur, Malikhera-Devapura-South Dedwas-North Dedwas-Samodi-Tiranga, Jasma-Rewara-Karor, Kalahudi-Bethumni, Banswara, Ajari, Basantgarh, Pipela-Watera lead-zinc complex of Rajasthan. Among them the Zawar mine near Udaipur is famous for the old workings for zinc. Here the evidence of old workings spread for about 25 km.\textsuperscript{403} Copper was probably brought form the several mines of Rajasthan discussed above.

**GOLD OBJECTS:**

Two gold objects have been reported from the Apsidal Temple No. 2 at Sonkh. One is a thin small gold foil of rhomboid shape and embossed with two concentric semi-circles in the centre and a framing line of dots along the edge. This foil measures (1.75 x 2.70) cm.\textsuperscript{404} (Pl. CLXXXVI, 1) Another specimen is a crushed bead of gold foil. It is hollow, lenticular in section and a stiffened rim present on both ends for the passage of the thread. It is about 2.2 cm in length and 1 cm in height.\textsuperscript{405} (Pl. CLXXXVI, 2) Both of them probably belonged to the early Kushâna period.

Since we do not have any references of gold mines in and around Mathurâ region, it seems that gold was probably brought from the Karnataka-Mysore region. The most important sources in this region are the Kolar gold mine in Mysore, Hutti gold mines in Raichur district (Mysore), Ramagiri area in the district of Anantpur (Tamil Nadu) and Wynaad area in the district of Nilgiri (Tamil Nadu). The workings at Hutti contain the deepest ancient shafts in India.\textsuperscript{406} Besides these, gold was
probably brought from Afghanistan or Chinese Turkistan via north-west land route.407

Jewellery Moulds - In absence of a sizeable collection of jewellery moulds in our study materials it is very difficult to give an extended discussion about the various issues related to the moulding techniques adopted in the metal technology of the Kushāṇa period. However a single specimen certainly hinted towards the utility of moulds in the manufacturing process of jewellery and its significance for the same.

A single specimen of jewellery mould has been unearthed from the Kushāṇa period (Level 18) at Sonkh. It is a fragmented terracotta mould probably used for the manufacturing of a toe ring. It measures (3.4 X3.1 X1.2) cm and grey to brown in colour.408 (Pl. CLXXXVII)

Similar types of jewellery moulds, but made in soapstone were found from the contemporary period at Miadan in the Swat Valley of the north-western frontier provinces of Pakistan. These were probably used for making finger-rings.409

From the brief discussion of metal objects, we have made some following observations-

1. The above information is very brief in nature and has several limitations in analyzing the metal related issues of the Kushāṇa period at Mathurā. We have seen that the metal industry of Mathurā is by and large dominated by copper and iron objects. But due to the absence of statistical information it is very difficult to give a percentage of these objects documented in the present work. Brief reports of Mathurā excavations never mentioned the types/morphological descriptions and statistical information of such objects unearthed from the Kushāṇa period. The Excavation report of Sonkh stated the total numbers of metal objects unearthed from
various phases, rather than the numerical strength of a particular period.

2. The metal used for making such objects are- copper, iron, brass and gold.

3. Copper objects/artefacts include ornamental objects like antimony rods, bangles, rings, beads, toe-rings and nail-parers; household objects like pins; game objects like carts and few indeterminate objects.

4. Almost identical types of copper objects/artefacts have been reported from the contemporary Kushāṇa periods at Hastināpura (antimony rods, rings, beads), Kauśāmbī (rings, beads), Ahichchhatra (beads) in the Ganga Valley; Taxila (antimony rods, pins) in the north-west and even Shaikhan Dheri (antimony rods) in the Swat Valley.

5. Iron objects/artefacts include hunting tools like arrowheads and spearheads; household objects like knives, clamps, sickles, hooks, ladles, mounting, snaffle bits and nails; game objects like rattle bells; ornamental objects like ear-rings, foot-rings and few miscellaneous objects.

6. Almost similar types of iron objects/artefacts have been reported from the contemporary Kushāṇa period at Hastināpura (nails), Kauśāmbī (ladles and nails) in the Ganga Valley; Taxila (arrowheads, knives, nails) in the north-west and even at Shaikhan Dheri (arrowheads, knives, ladles, nails) in the Swat Valley.

7. Brass objects include a bowl lid and an unidentified conical object.

8. Gold objects include a small gold foil and a crushed bead of gold foil, probably used for ornamentation.

9. At present no metallurgical study has been done on the metal artefacts of the Mathurā region, particularly of the Kushāṇa period. H.C. Bharadwaj has made a study on a coin of Rāmadatta of...
Mathura. This coin chronologically belonged to 100 B.C. This coin has 95.27% of copper, 0.25% of lead, 0.85% of iron and 0.98% of nickel in its material composition. Here we should mention that, excavations at Mathura and Sonkh have yielded a number of copper coins from the Kushāṇa period, which have already been discussed in the respective chapter. But no metallurgical study has so far been done on these copper coins.

10. Our analysis exhibits continuity of certain metal artefacts from the earlier to the later period. The consumption of metals and the procurement process of metal artefacts in the exchange network clearly show a long history so far as Mathura and Sonkh are concerned. In this context we should mention that, metal industry of the Kushāṇa period at this region was a continuation of the earlier tradition since the PGW period, which in few cases also continued up to the post-Kushāṇa periods.411

Copper antimony rods were found to have continued from the P.G.W. period (Period I) at Mathura and from Period III at Sonkh. In the pre-Kushāṇa phase antimony rods were found mainly with round club ends, but in the Kushāṇa phase it became rounded and thickened. Copper rings were found to have continued from Period III at Sonkh. Copper pins probably continued from Period IV at Sonkh. The rounded ends pins of the pre-Kushāṇa period became pointed during the Kushāṇa phase.

Iron arrowheads were found to have continued from the P.G.W. period (Period I) at Mathura and Sonkh. Socketed and tanged arrowheads of different shapes appeared in the pre-Kushāṇa periods at Sonkh continued till the Kushāṇa period (Period V). Iron spearheads probably continued from Period I at Mathura and from Period III at Sonkh. Tanged and socketed spearheads of the pre-Kushāṇa period at Sonkh continued till the Kushāṇa period (Period

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V). Iron knives probably continued from Period II at Mathurā and from Period IV at Sonkh. Iron clamps probably continued from Period IV at Sonkh. Iron sickles probably evolved from Period III at Sonkh. Iron hooks probably continued from Period IV at Sonkh. Iron ladles continued from Period IV at Sonkh. Iron nails were found to have continued from Period II at Mathurā and Sonkh.

In continuation of the metal industry of the Kushāṇa period, few objects like copper rings, iron arrowheads, iron nails and iron hooks were also found from the post-Kushāṇa periods (Periods VI-VIII) at Sonkh.

11. Evidence of brass objects from the pre-Kushāṇa (Periods III and IV) and Kushāṇa period indicate that the people of Mathurā knew the technology of making alloy from the early days. A few gold objects from the pre-Kushāṇa and Kushāṇa period at Mathurā and Sonkh may suggest the increasing economic prosperity since the pre-Kushāṇa period.

12. The Kushāṇa inscriptions of Mathurā referred to the workers/traders in iron (lohiṇḍikāraka/lohaṇāyiya) and gold (suvarṇakāra/suvarṇakarikā), which could be substantiated by the occurrences of iron and gold objects in the Kushāṇa period at Mathurā and Sonkh.

13. In one hand the metal industry of the Kushāṇa period in this region reflects the extension of a similar tradition exhibited in other centres of the Ganga valley and north-western provinces, on the other hand procurement of raw materials from different places may indicate increase of short and long distance trade.
STONE OBJECTS:

Apart from the stone sculptures (discussed in Chapter V), stone objects/artefacts are also a significant part of assemblages found from the Kushāṇa period in the Mathurā region. These objects were mainly used for household, ornamentation, toilet, religious and miscellaneous purposes. Household objects include milling tools like querns, pestles and dabbers, mortars, ring stones. Ornamental objects consist of beads and pendants of different semiprecious stones. Toilet objects include stone plaques and trays, caskets and lids etc. Religious objects include relic-caskets. Miscellaneous objects include stone discs, stone balls and stone bowls. We are aware about the fact, that Mathurā red sandstone which was the major raw material for the sculptural remains, was used partially as there are other raw materials in form of slate, grey sandstone, soap stone varieties of rocks available for the stone artefacts recorded below. Before analyzing the stone objects/artefacts of the Mathurā region, it is to be noted that stone objects/artefacts of the Kushāṇa period is a poorly reported aspect of the Mathurā excavations and few stone objects were reported during excavations. Whereas, Sonkh could be treated as more informative so far as the stone objects are concerned. In the following pages we have tried to classify the stone objects/artefacts into different categories, on the basis of their morphological characters.

Household Objects -

Milling Tools: – A good number of milling tools in forms of querns, pestles and dabbers, mortars and ring stones have been found from the Kushāṇa period at Mathurā and its surrounding regions.
Altogether one hundred forty nine specimens of milling tools in forms of querns, mortars, pestles, dabbers and ring stones have been reported from different occupational periods at Sonkh. They were made of mottled red sandstone or grey sandstone. At Sonkh such objects were found from the Mauryan up to the medieval period, but the bulk of the specimens belonged to the Kushāṇa levels. Such objects have also been reported from the Kushāṇa period at Mathurā.

A) Querns - We can classify the entire collection of querns of the Kushāṇa period into three categories - a) rotary querns, b) legged querns or quern tables and c) quern plates.

a) Rotary Querns - The lower part of a rotary quern (chhāki) with an iron rod fixed in the center has been reported from the Kushāṇa period at Mathurā. Only one specimen of such quern found from the Kushāṇa occupational period has been illustrated in the excavation report of Sonkh. It is a fragmented piece of rotary quern in the shape of a jar with a central perforation. It is made of grey sandstone and measures (18X14.3X13.6) cm. The specimen has been unearthed from the Kushāṇa period (Level 16) at Sonkh. (Pl. CLXXXVIII, 1)

b) Legged Querns/Quern Tables - A single specimen of legged quern reported from the Kushāṇa period illustrated in the excavation report of Sonkh. It is a fragmented legged quern with the plate projecting on the small side and legs worked out by cutting a round arch. The specimen measures (18.3X14.9X13) cm and made of mottled red sandstone. It has been recovered from Period V (Level 22) at Sonkh. (Pl. CLXXXVIII, 2)

c) Quern Plates - Rectangular quern plates or querns without legs have been unearthed from the Kushāṇa period at Mathurā. A mini quern reported from this period is decorated with floral
motifs. Three specimens of such querns reported from the Kushāṇa occupational period have been illustrated in the excavation report of Sonkh. Among them two quern plates were found along with pestles. Both the plates are rectangular in shape and made of mottled red sandstone. In one specimen the pestle is ovoid in section and had been unearthed from Level 19 at Sonkh. The plate measures (35X18.5X5.9) cm and is and the pestle is 22 cm in length. (Pl. CLXXXVIII, 3) In the second one the pestle is plano-convex in section and recovered from Level 19 at Sonkh. The plate measures (47X24.5X5.7) cm and the pestle is 33 cm in length. (Pl. CLXXXVIII, 4)

B) Pestles and Dabbers - Among one hundred forty nine excavated milling tools, seventy-nine were identified as pestles or dabbers by the excavators of Sonkh. Some of them were used both as pestles and dabbers. Stone pestles have also been reported from the Kushāṇa period at Mathurā. On the basis of their cross-sections, such specimens of the Kushāṇa period can be divided into five different types-

Type I - Long pestles with plano-convex section and thickened ends. One such specimen has been unearthed from the Kushāṇa period (Level 22) at Sonkh. It is 37.5 cm in length and made of red sandstone. (Pl. CLXXXVIII, 5)

Type II - Pestles or dabbers with lenticular sections. This type of pestles was reported from the Kushāṇa period at Mathurā and Sonkh. One such specimen unearthed from the Kushāṇa period at Sonkh is 5.1 cm in diameter, 8.6 cm in length and made of grey sandstone. (Pl. CLXXXVIII, 6)

Type III - Pestles with circular or nearly circular sections. One such specimen unearthed from the Kushāṇa period at Sonkh is 6.5 cm in
diameter, 17.7 cm in length and made of mottled red sandstone.\textsuperscript{423} (Pl. CLXXXVIII, 7)

**Type IV** – Pestles with ovoid sections and slightly increasing in thickness from one end to the other. One such specimen from the Kushāṇa period (Level 19) at Sonkh measures (11.6X6.7) cm and is made of mottled red sandstone.\textsuperscript{424} (Pl. CLXXXVIII, 8)

**Type V** – Pestles with elliptical sections have been reported from the Kushāṇa period at Mathurā.\textsuperscript{425}

During our field works, we have also collected a few stone pestles, probably of the Kushāṇa period from this region. (Pl. CLXXXIX)

**C) Mortars** - Only two mortars of the Kushāṇa period have been illustrated in the excavation report of Sonkh. Both the specimens are made of mottled red sandstone and have rough outer sides for placing it in the earth. One such mortar along with a pestle has been found from the Kushāṇa period (Level 16) at Sonkh. The mortar is conical in shape and the rough exterior proves that the object had to be embedded in the ground to make it workable. The mortar measures (50X25.5X25) cm and the pestle is 27 cm in length.\textsuperscript{426} (Pl. CLXXXVIII, 9)

**D) Ring Stones** – Circular ring stones with perforations at both sides have been recovered from the Kushāṇa period at Sonkh. One such specimen unearthed from the Kushāṇa period (Level 21/20) at Sonkh is made of grey sandstone and 3.1 cm in diameter.\textsuperscript{427} (Pl. CLXXXVIII, 10)

Sandstone pestles and rotary querns have been found from the contemporary period (Period IV) at Hastināpura.\textsuperscript{428} Besides, excavations at Shaikhan Dheri in the Swat Valley have also yielded grinding tools like mortars and querns from the contemporary Kushāṇa levels.\textsuperscript{429}
Ornamental Objects -

Stone Beads: - The analysis of the classified forms of beads found in and around Mathurā restricted us in various ways. The main constrain is the paucity of useful data from the site of Mathurā itself. However, our present discussion is essentially based on the collection of Sonkh and a general impression about the collection of Mathurā now housed in the Reserved Collection of the A.S.I, Purana Qila, New Delhi. In this context it is worth mentioning that, the Purana Qila collection possesses the maximum number of types of beads found in the Ganga valley. Therefore, the interesting study carried out by S. Jamal Hasan on the beads of Ganga valley may be useful in formulating a general observation and the context of beads of the Mathurā region. Similarly the work of C. Margabandhu has special significance in the context of etched beads found during excavations at Mathurā. There is enough possibility about the presence of beads at the site of Mathurā through trading network. Apart from these, the circulation of beads between Uttarāpatha and Dakṣiṇāpatha through the trading network of Mathurā also deserves special mention. The present work has limited scope in explaining in details the process of manufacturing and technological aspects including the procurement of raw materials from different places including the nearby areas of Aravalli Hills.

A large variety of semi-precious stone beads made of carnelian, agate, chalcedony, crystal, faience, jasper, lapis lazuli, quartz, amethyst, chert etc. have been found during excavations at Ahichchhatra, Sravasti, Kauśāmbī, Rājghāt, Tilaurakot, Kumrahar, Vaisali, Prahladpur, Hastināpura, Pātaliputra, Sonepur and other sites of the Ganga valley. Similar types of beads have also been reported from Mathurā and Sonkh in different chronological contexts. S. Jamal. Hasan’s work on beads of
the Ganga valley clearly exhibits the diversity of raw materials and types of beads found in different chronological contexts of the Ganga valley.

Among three hundred nine beads of semi-precious stones, one hundred sixty four beads have been reported from the Kushāṇa period at Sonkh. In this context we should mention that we have no information about the numerical values of such stone beads excavated from Mathurā.

a) Etched Beads - Etched beads have decorative patterns etched on their surface by alkali-soda. The earliest specimens of etched beads were reported from the Harappan sites. M.G. Dikshit has done the first pioneering work on the nature and distribution of etched beads in India. Beads of carnelian and agate (in general) and chalcedony and quartz rarely are found decorated with etched patterns.

Different types of etched beads made of agate, carnelian and chalcedony have been discovered from excavated sites of the Ganga Valley.

The general shapes of agate etched beads found from the Gangetic valley are - 1. long barrel with connected pentagons in two rows and marginal bands, 2. long barrel circular with diamond shaped designs and zonal bands, 3. long barrel circular with four zonal bands, 4. spherical with eight dotted concentric circle, 5. spherical with connected pentagons, 6. spherical with connected pentagons in two rows, 7. spherical with a dotted spiral, 8. spherical with a wavy band, 9. cylindrical with white chalcedony bands, 10. four sided with a white band.

Etched beads of carnelian reported from the Ganga valley represent the following shapes - 1. spherical with white dots, 2. spherical with eight dotted concentric circle, 3. spherical with spotted, 4. spherical with four sets of double convex lines, 5. standard cylinder circular with two zonal bands, 6. short cylindrical circular with zonal
bands, 7. small standard cylinder, 8. long barrel with connected pentagons in two rows and marginal bands, 9. long barrel circular with diamond shaped designs and zonal bands, 10. long cylindrical circular with three zonal bands, 11. flat trapezoidal with strips, 12. multifaceted with broad lines on each facets etc.

General shapes of etched chalcedony beads found in the Ganga valley are\textsuperscript{437} – 1. long cylinder circular with inconspicuous zonal grooves round the body without any trace of colour, 2. long inconspicuously convex circular with six zonal bands etc.

Altogether twenty five etched beads made of agate, carnelian, chalcedony and white quartz have been recovered from different occupational periods at Sonkh. Out of them ten beads belonged to the Kushāṇa period. The representative shapes are\textsuperscript{438} –

i) Spherical carnelian bead with white fringed dots (1)
ii) Spheroid carnelian bead with white circles (1)
iii) Spherical carnelian bead etched with grey pattern (1)
iv) Barrel white quartz bead with black pattern (1)
v) Long barrel agate bead with white pattern (5)
vi) Long barrel carnelian bead with black “suns” (1)

Two best specimens of etched beads from Sonkh are illustrated below:

1. Black agate (Pl. CXC, 1) of long barrel circular shape etched with white ornament has been unearthed from the Kushāṇa period (Level 22) at Sonkh. It is 0.8 cm in diameter and 1.9 cm in length.\textsuperscript{439}

2. Spherical carnelian bead with white etched pattern on orange body has been recovered from the Kushāṇa period (Level 21) at Sonkh. It is 0.7 cm in diameter.\textsuperscript{440} (Pl. CXC, 2)

In his brief paper on “Etched beads from Mathurā Excavations – A Note”, C. Margabandhu tried to study the patterns and geographical contexts of the etched beads from Mathurā to determine their cultural
and chronological range. Most of the etched beads found from Mathurā belonged to type- I of Dikshit’s classification based on the method of their manufacturing. Beads of this type depicted white patterns either on the surface of red carnelian or black agate. Six patterns of etched beads have been reported from excavations at Mathurā. Among them Patterns I and IV were recovered from the Kushāṇa period and Patterns II, III, V and VI were known from the pre-Kushāṇa period and were supposed to have continued till the Kushāṇa phase.

Pattern I (IL.58) - This pattern includes spherical carnelian beads etched with minute spots or dots all over the body. The dots are uniformly arranged in rows executed all through in concentric circles. This type of beads has been found at Mathurā from the levels of the early 1st century A.D. up to the end of the 3rd century A.D.

This type of etched beads have also been found from Kauśāmbī (1st century B.C.-1st century A.D.), Vaisali (2nd-1st century B.C.), Tilaura-kot (3rd century B.C.), Rājghāt (1st-3rd century A.D.), Kumrahar (4th-5th century A.D.), Alamgirpur (3rd century B.C.), Rairah (1st century A.D.) and also from Taxila (4th century B.C.-1st century A.D.) In some sites this pattern found to be represented not only in carnelian but also in agate and chalcedony.

Pattern IV (IL.58) - This pattern consists of barrel shaped beads decorated with three zonal bands and the central one being etched with small-serrated lines. At Mathurā this pattern occurred in the levels of 1st century A.D. This type of beads are mainly found in barrel shaped, but sometimes spherical were also found.

This type of etched beads have also been found from Tilaura-kot (3rd century B.C.), Ujjain (1st century B.C.) and Taxila (1st century B.C.).
b) **Incised Beads** – Five incised beads have been unearthed from the Kushāṇa period at Sonkh. The representative shapes are – long barrel collared beads of milky quartz (1), long barrel one collared bead of milky quartz (3) and long barrel one collared bead of carnelian (1).456

c) **Beads of Carnelian** – The predominant shapes of carnelian beads found from the Gaga valley are – spherical, standard barrel circular, standard bicone hexagonal, standard spherical, short bicone hexagonal, short barrel circular, short bicone square, square barrel, long barrel circular, long barrel hexagonal, long barrel square, long cylinder circular, long truncated bicone hexagonal, long cylinder square, circular tabular, circular plano-convex, barrel circular, disc etc.457

Excavations at Mathurā and Sonkh have also yielded a large number of carnelian beads from the pre-Kushāṇa and Kushāṇa period. Total eighty-one carnelian beads have been recovered from Sonkh. Among them thirty seven beads belonged to the Kushāṇa period. The most popular shapes are spherical and polyhedron, having ten and seven specimens respectively. Other important shapes are – spheroid with one concave end (1), long barrel (3), short barrel (2), cylinder(1), cylinder disc(1), long truncated by pyramid hexagonal (1), tabular(2) etc.458

One carnelian bead unearthed from the Kushāṇa period (Level 21) at Sonkh is spherical in shape and orange in colour. It has a diameter of 1cm.459 (Pl. CXC, 3)

Carnelian beads have been found from various sties of the Ganga-valley in different chronological contexts. Such beads have been reported from the contemporary Kushāṇa periods at Hastināpura (Period IV),460 Ahichchhatra (Stratum IV),461 Rājghāt (Period III)462, Kauśāmbī (Sub-Period VI)463 . The shapes comparable to the Sonkh are – spherical, long barrel, short barrel, tabular, cylinder etc.
**d) Beads of Agate** - The major shapes of agate beads reported from the Ganga valley are - spherical, standard truncated bicone circular, standard cylinder circular, standard cylinder hexagonal, standard barrel circular, tabular, short barrel circular, short cylinder circular, square tablet, barrel circular, circular, convex cylinder, globular, truncated barrel etc. It may be argued that as one of the flourishing sites of the Ganga valley, Mathurā should possesses maximum numbers of the above-mentioned shapes.

Among thirty-eight agate beads from Sonkh, twenty-one have been reported from the Kushāna period. The majority of them are represented by long barrel circular or elliptical shape (6). Apart from this the other notable shapes are- spherical (1), long barrel plano-convex(1), short barrel (1), cylinder (2), long cylinder (1), short bicone convex (1) etc. Three selective specimens of agate beads of the Kushāna period are illustrated below-

1. Agate bead (Pl. CXC, 4) of long barrel oval shape with grey brown striation marks has been recovered from the Kushāna period (Level 20/19) at Sonkh. It is 0.67 cm in diameter and 1.65 cm in length.

2. Agate bead of long barrel circular shape with transparent milky layers has been discovered from a ditch of Level 19 at Sonkh. It is 0.75 cm in diameter and 2 cm in length. (Pl. CXC, 5)

3. Long barrel elliptical agate bead of black, white and blue in colour has been unearthed from the Kushāna period (Level 21) at Sonkh. It is 2.24 cm in length, 1.35 cm in width. (Pl. CXC, 6)

Various types of agate beads have been found from the contemporary Kushāna period at Hastināpura (Period IV), Kauśāmbi (Sub-period V-VIII), Ahichchhatra (Stratum IV), Rājghat (Period III) and Kumrahar (Period II), Taxila (Phase II-IV) and Shaikhan Dheri. The shapes similar to Sonkh are- spherical, short barrel, cylinder etc.

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e) **Beads of Amethyst** - The major shapes of amethyst beads found from the Ganga valley are - long barrel flattened hexagonal, long barrel elliptical, long convex hexagonal, long cylinder hexagonal, long plano-convex, short bicone hexagonal, triangular faceted etc. Altogether ten amethyst bead have been found from the excavations at Sonkh. Among them four belonged to the Kushāṇa period. The shapes are - lenticular (1), barrel pentagonal (2), barrel hexagonal (1) etc. The best selective specimen from Sonkh is illustrated below –

1. Amethyst bead of violet colour having long barrel pentagonal shape with eccentric channel has been unearthed from the Kushāṇa period (Level 21) at Sonkh. It is 0.8cm in diameter and 1.15 cm in length.

f) **Beads of Chalcedony** - The predominant shapes of chalcedony beads found from the Ganga valley are- spherical, spherical but flat at two ends, standard cylinder circular, standard diamond, square barrel, long barrel circular, long barrel hexagonal, long truncated bicone circular, tablet shapes etc. Out of seventeen chalcedony beads five have been reported from the Kushāṇa period at Sonkh. Main shapes are - truncated bipyramid tetragonal (1) and toggle (1). Excavations at Mathurā have also yielded good quantity of chalcedony beads of different shapes.

Chalcedony beads of various shapes have been reported from the contemporary Kushāṇa period at Hastināpura (Period IV), Kauśāmbi (V-VIII), Rājghat (Period III), Kumrahar (Period III).

g) **Beads of Jasper** - Excavated sites of the Ganga valley yielded Jasper beads of variegated shapes like- spherical, barrel circular, corner less cube, disc, double hexagonal, faceted twisted pentagonal, long barrel circular, long flattened hexagonal etc. Altogether eleven beads of
Jasper have been found during excavations at Sonkh. Among them three specimen belonged to the Kushāṇa period, represented by the polyhedron shape.487

Various shapes of jasper beads have been reported from the contemporary Kushāṇa period at Hastināpura488 (Period IV), Kauśāmbī489 (Sub-Period V-VIII), Rājghāt490 (Period III), Kumrahār491 (Period III), Taxila492 and Shaikhan Dheri.493

h) Beads of Lapis lazuli - The major shapes of lapis lazuli beads found in the Ganga valley are - disc, globular, long cylindrical circular, long cylinder hexagonal, standard cylinder circular, standard barrel circular, short cylinder circular etc.494 Only four lapis lazuli beads have been recovered from Sonkh. Among them three belonged to the Kushāṇa period. The representative shapes are – long barrel octagonal (1), prism tetragonal (1), truncated pyramid tetragonal (1) etc.495 The best selective specimen is illustrated below –

1. Lapis lazuli bead of truncated square shape, 1.2 cm in diameter, 1.3 cm in length has been unearthed from the Kushāṇa period (Level 21) at Sonkh.496 (Pl. CXC, 8)

Various shapes of Lapis lazuli beads have been reported from the Kushāṇa contemporary period at Kauśāmbī497 (Sub-periods V-VIII), Rājghāt498 (Period III) and Shaikhan Dheri499 in the Swat Valley.

i) Beads of Faience - The predominant shapes of faience beads found from the Ganga valley are – spherical, short barrel circular, long barrel circular, long cylinder hexagonal, corner less cube, amalaka shape etc.500

Among seventy three faience beads sixty two have been reported from the Kushāṇa period at Sonkh. The most popular shapes are short barrel angular, short column corner less and cog wheel, represented by are eight, seven and seven specimen respectively. Other shapes are –
ellipsoid (1), long barrel circular (4), long barrel tetragonal (1), long barrel pentagonal (1), long barrel hexagonal (2), short barrel circular (3), short cylinder (1), short column rectangular (1), column square corner less (5), oblate oval (1), toggle (3), spherical gadrooned (3), oblate pentagonal gadrooned (1), short barrel spiked (2), jar-shaped gadrooned (1) etc.501

Three selective specimens are illustrated below –

1. Jar shaped faience bead with gadrooned body and white turquoise in colour has been recovered from the Kushāṇa period (Level 23/22) at Sonkh. It is 1 cm in diameter, 0.77 cm in length.502 (Pl. CXC, 9)

2. Awl shaped toggle bead of faience (Pl. CXC, 10) of turquoise colour has been unearthed from the Kushāṇa period (Level 22) at Sonkh. It is 2.04 cm in length, 0.5 cm in width and 0.3 cm in diameter.503

3. Light blue-green faience bead of animal’s head shape has been reported from the Kushāṇa period (Level 21) at Sonkh. It is 0.95 cm in length, 1.3 cm in width and 0.8 cm in diameter.504 (Pl. CXC, 11)

Faience beads of various shapes have been reported from the contemporary Kushāṇa period at Hastināpura505 (Period IV), Kauśāmbi506 (Periods V-VII), Rājghāt507 (Period III), Taxila508 (1st century A.D.), Charsada509 (2nd century A.D.) and Shaikhan Dheri510 in the Swat valley.

**j) Beads of Quartz** – The major shapes of quartz beads recovered from the Ganga valley are – spherical, cylindrical, collared barrel elliptical, collared tablet shapes, hexagonal, long cylinder square, long barrel circular, long barrel hexagonal etc.511 Excavation at Sonkh has yielded eighteen beads made of white quartz. Out of them six specimens having barrel circular (3), barrel hexagonal (1) and polyhedron (2) shapes have been found from the Kushāṇa period.512 One selective specimen of quartz bead from the Kushāṇa period is illustrated below –
1. White Quartz bead of long barrel elliptical shape with rudimentary rims and decorated with incised cross hatch patterns has been unearthed from the Kushāṇa period (Level 21) at Sonkh. It is milky white in colour with traces of blue-green residues, 1 cm in diameter and 1.5 cm in length.\(^{513}\) (Pl. CXC, 12)

**k) Beads of Crystal** – The main shapes of crystal beads that occurred in the Ganga Valley are – spherical, short truncated bicone hexagonal, short cylinder convex hexagonal, standard bicone twisted pentagon, standard circular lenticular, long barrel circular, long hexagonal etc.\(^{514}\) Crystal beads have been reported from Mathurā\(^{515}\) and Sonkh. Altogether twenty-nine beads of rock crystal have been unearthed from various periods at Sonkh. Out of them seven were reported from the Kushāṇa period. The main shapes are – spherical, lenticular, bi pyramid hexagonal, truncated bi pyramid square, polyhedron hexagonal, etc.\(^{516}\)

Various shapes of crystal beads have been found from the contemporary Kushāṇa period at Kauśāmbi\(^{517}\) (Periods V-VII), Ahichchhatra\(^{518}\) (Stratum IV) and Rājghāṭ\(^{519}\) (Period III).

**Stone Pendants:** – Excavations at Sonkh have yielded one drop pendant of agate, one hexagonal drop pendant and one truncated bipyramid tetragonal pendant of amethyst, three cowry shaped and one frog shaped pendant of faience from the Kushāṇa period at Sonkh.\(^{520}\)

The raw materials for the manufacturing of beads and pendants were procured during the Kushāṇa period from various sources. As most of the beads were prepared from the semi-precious stones, we may assume that various sources of Aravalli Hilly Complex in Rajasthan were used for the same. Besides there are few raw materials for the bead manufacturing must have procured from the Afghanistan region through
trading network, as there was a long distance trade between different Kushāṇa centre from Mathurā to Taxila, Taxila to Gandhara and Gandhara to Central Asia. Agate must have been brought from Bayana and Buneerah in Rajasthan and the Robertsgunj Tahsil of Mirzapur or from Gulf of Cambay and Broach in Gujrat. Carnelian most probably brought from the Banas region of Rajasthan or from Gujrat, chiefly from the State of Rajpipla (Ratanpur near Broach) and also from the inland Narmada Valley regions around Jabalpur. Jasper probably brought from Mirzapur between Agori and Titihisar in the Banas region in Rajasthan and from the valleys of Narmada and Son in Madhya Pradesh. Lapis Lazuli probably obtained from Badakshan (Afganistan) and amethyst probably came from Sri Lanka. Rock crystal probably came from Arunagpur near Delhi, Rajmahal hills and Sambalpur and clear crystal found at Daosa in Jaipur and at Nawal and Hathona in the district of Tonk.

**Toilet Objects**

**Stone Trays and Plaques:** - Altogether twenty-four fragments of rectangular or round stone plaques and trays have been unearthed from the Kushāṇa and later periods at Sonkh. All of them are incised or carved with decorations. Most of them are toilet trays with dish like centre and others are flat plates. They are made of either mottled red sand stone or of grey slate.

One stone plaque unearthed from the Kushāṇa period (Level 17) at Sonkh is rectangular in shape with circular center marked by a single circumference line and the corner is decorated with finely incised blossom. It measures (8.05X6.65X1.27) cm and made of mottled red sand stone. (Pl. CXCI, 1)
Stone trays from Sonkh can be classified into two types: 1. Trays with dish-like centres and 2. Trays with plain centres.

One specimen with a central dish has been unearthed from the Kushāṇa period (Level 17) at Sonkh. It is rectangular in shape and carved with various designs. In the corner, there is a plain circle with elevated edge touching the border of leaves surrounding the damaged center. Above it appears the head of a fish running across another aquatic animal. It measures (5.4 X4.5X0.5) cm and is made of light grey slate.530 (Pl. CXCI, 2)

Another specimen with plain center has been recovered from the Kushāṇa period (Level 16) at Sonkh. It is rectangular in shape and bordered with pointed lotus petals framed by incised double-lined circles. Towards the edge other floral motifs are visible. The reverse is flat and undecorated. It measures (9.5X8.5X1.8) cm and is made of violet grey slate.531 (Pl. CXCI, 3)

Stone trays have been reported from the contemporary Kushāṇa phases at Shaikhan Dheri in the Swat Valley.532

Caskets and Lids: - Soap stone/steatite caskets and lids have been reported from the Kushāṇa period at Mathurā.533

Altogether sixty-four fragments of caskets and lids have been found from Period III to V (Mitra to Kushāṇa) at Sonkh. Majorities of the specimens were reported from the Kṣatrapa (Level 24-23) Period. They are made of soap stone (steatite), slate or schist. The diameter varies between 4.0 cm and 9.0cm. With a few exceptions all specimens are more or less decorated.534 These caskets were probably used as toilet objects. The best specimens unearthed from the Kushāṇa levels are illustrated below

1. Splintered lid of a casket, decorated with a double circular line along the edge and another double line pretending a knob has been unearthed from the Kushāṇa Period (Level 21) at Sonkh.
Single incised lotus petals are visible between the knob and the edge of the lid. It is made of grey slate and 3.7 cm in diameter.\textsuperscript{535} (Pl. CXCI, 4)

2. A stone lid of schist with central knob has been unearthed from the Kushāṇa period (Level 16) at Sonkh. It is decorated with a number of single circular lines. It is grey in colour, 1.9 cm in height, and 5.1 cm in diameter.\textsuperscript{536} (Pl. CXCI, 5)

3. Knob of a lid of a casket decorated with one circular groove each along the edge and in the center has been reported from Kushāṇa period (Level 21) at Sonkh. It is made of black polished slate and 3.7 cm in diameter.\textsuperscript{537} (Pl. CXCI, 6)

Casket and lids have also been reported from the Kushāṇa contemporary phases/periods at Hastināpura\textsuperscript{538} (Period IV), Kauśāmbī\textsuperscript{539} (Sub-Periods V-VIII), Taxila\textsuperscript{540} and Shaikhan Dheri\textsuperscript{541} in the Swat Valley.

**Religious Objects** -

**Relic-Caskets**: Two relic-caskets, one of steatite and the other of crystal have been discovered from the Chaubāra mounds and now deposited in the State Museum, Lucknow. These relic-caskets actually represent a set of dhātu-maṅjūśās as the crystal relic-casket was placed within the steatite relic-casket.\textsuperscript{542} During his visits at Mathurā, Sir Alexander Cunningham discovered a small gold casket and a steatite relic-casket from the Chaubāra mounds.\textsuperscript{543}

The steatite relic-casket is spheroidal in shape and is divided in two sections. The lower piece in its upper portion has a grooved segment into which the other section fits as the lid. Within it the smaller casket of crystal was emboxed and probably contained some minute pieces of sacred relic-bones. The inner casket represents a phial-shaped Karandaka with a lid. Both of these relic-caskets seem to have been
recovered from an ancient Buddhist stūpa and can be dated to the Kushāṇa period.\textsuperscript{544}

More or less similar types of relic-caskets made of both steatite and crystal have been reported from the Buddhist edifices at Bhattiprolu,\textsuperscript{545} Vaishali,\textsuperscript{546} Amaravati\textsuperscript{547} and Taxila.\textsuperscript{548} Besides, such reliquaries were also found from Piprahwa,\textsuperscript{549} Sanchi,\textsuperscript{550} Nagarjunakonda,\textsuperscript{551} Pithakhora,\textsuperscript{552} Sopara\textsuperscript{553} and other sites.

\textbf{Miscellaneous Objects -}

\textbf{Stone Discs:} – Altogether twenty stone discs have been recovered from different periods at Sonkh. But the report never mentioned the proper periodization of such objects. Most of the specimens are made of mottled red sandstone. One such disc with roughened surface has been unearthed from the Kushāṇa period (Level 20/19) at Sonkh. It is 6.5 cm in diameter and 3.2 cm in thickness.\textsuperscript{554} (Pl. CXCII, 1) Another specimen unearthed from the Kushāṇa period (Level 17/16) at Sonkh has flat top and smooth base. The specimen is 3.9 cm in diameter and 1.4 cm in thickness.\textsuperscript{555} (Pl. CXCII, 2) These stone discs were probably used as a game objects or as a weight for measurement.

\textbf{Stone Balls:} – The excavations at Sonkh have yielded at least one hundred one stone balls from different occupational periods. But unfortunately the report never mentioned the numbers of balls unearthed from the Kushāṇa period. The balls are made of sand stone or quartzzite and mostly are spherical in shape. The size ranges between 1.8 cm and 11 cm in diameter, but the bulk of the specimens measure between 3 cm and 4.9 cm. The smallest balls (1.8 – 1.9 cm in diameter) were represented by nine specimens and have been found from Period V to VII (Kushāṇa to Medieval). Sixty-three balls with 3.0cm to 4.9 cm in
diameter occurred in all levels. The biggest balls (10.1 cm- 11.0 cm in diameter) include only one specimen. These balls were probably used as a game objects or as a sling balls for hunting purposes.

**Stone Bowls:** - Besides caskets and lids a few stone bowls have also been reported from this region. Two stone bowls have been recovered from the Apsidal Temple No. 2 at Sonkh. One is a steatite bowl of hemispherical shape having grooved upper wall, direct sharpened rim bordered by two thin grooves on the outside. It is pinkish white in colour and 3.6 cm in diameter. (Pl. CXCIII, 1) Another is a fragmented sandstone bowl, decorated with incised pointed lotus petals and a borderline of triangular notches on the outside. It is white in colour and measures (9.1X5.2X1.9) cm. (Pl. CXCIII, 2)

The *Indian Archaeology-A Review* (1979-80) has reported discovery of a stone bowl of the Kushāṇa period, inscribed with few Brāhmi letters from Dhauli Pyioo, Mathura.559

Mathura Museum also possesses a large bowl of mottled red sandstone ornamented with incised lotus petals. The specimen possibly belonged to the Kushāṇa period. (Pl. CXCIV)

From the brief discussion of such stone objects we have made some following observations-

1. We have meagre information regarding the numbers of stone objects reported from the Mathurā region. Brief reports of Mathurā excavations never mentioned about the types/morphological descriptions and statistical information of such objects unearthed from the Kushāṇa period. The Excavation report of Sonkh stated about the total numbers of such objects unearthed from various phases, rather than the numerical strength of a particular period.
2. The stone objects/artefacts include household objects like different types of querns, pestles and dabbors, mortars and ring stones; ornamental objects like beads and pendants of semi-precious stones (carnelian, agate, chalcedony, jasper, lapis lazuli, faience, quartz, crystal and amethyst); toilet objects like stone trays and plaques, caskets and lids; religious objects like relic-casket and miscellaneous objects like stone discs, stone balls etc.

3. Milling tools like different types of querns, pestles and dabbors, mortars and ring stones were mainly used for grinding and processing of food grains. All these objects were well connected with the farming and non-farming groups of the Mathurā. The concentration of milling tools in the stratigraphic contexts belonging to the Kushāṇa levels prove that processing of agricultural products had been taken place locally.

4. Our analysis hints about an overlapping situation of continuity of certain stone objects/artefacts from the earlier to the later periods. Milling tools continued from Period II at Sonkh and from Period I at Mathurā. Quern tables were popular during the pre-Kushāṇa period at Mathurā and Sonkh, while during the Kushāṇa period instead of quern tables, quern plates became predominant and rotary querns appeared in the late Kushāṇa period. Beads of semi-precious stones were reported from Period I at Sonkh and Mathurā. Stone caskets and lids are found to have continued from Period III at Sonkh. At Mathurā caskets and lids first appeared in the Kushāṇa period. Stone discs continued from Period III at Sonkh.

In continuation of the Kushāṇa tradition, few objects like milling tools, stone beads, trays and plaques etc are found to have occurred in the post-Kushāṇa periods (Periods VI-VIII) at Sonkh.
5. Availability of various types of semi-precious stone beads from Mathurā and other sites clearly indicate advancement of trading networks during this time. The circulation of beads between Uttarāpatha and Dakṣināpatha through the same exchange devices of Mathurā also deserves special mention. Occurrences of etched beads in the earlier chronological contexts at other sites may specify export of such beads to Mathurā. While discussing on the patterns and distribution of etched beads from Mathurā Margabandhu561 opines that “First, since Mathurā has not revealed any evidence of a local bead making industry, these beads may have come into Mathurā from elsewhere. Secondly, the beads’ pattern of distribution in other towns, both near and far from Mathurā indicates that trade in these objects possibly passed through Mathurā.”

6. Soap stone caskets and lids are exclusively reported from the Kushāṇa period at Mathurā and Sonkh. Similar types of caskets and lids and from Hastināpura, Kauśāmbī, Taxila and Shaikhan Dheri may indicate exchange of such objects either from Mathura to other sites or from those sites to Mathurā.

**MISCELLANEOUS OBJECTS (OBJECTS MADE OF BONE, SHELL, IVORY AND GLASS):**

This section contains the documentation of bone, shell, ivory and glass objects of the Kushāṇa period recovered from Mathurā and its surrounding regions.

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BONE OBJECTS:

Styli: - Altogether two hundred three bone styli have been found during excavation at Sonkh. Eleven styli of the Kushāṇa period have been illustrated in the excavation report of Sonkh. Most of the styli from the Kushāṇa period are double pointed and their length varies between 5.8 cm and 8.6 cm. A decorated bone stylus has been recovered from the Apsidal Temple No. 2 at Sonkh. The specimen bears a carved hand on one hand and the wrist is decorated with three bangles. It is 10.4 cm in length and the breadth of the hand is 1.3 cm.

A stylus found from the contemporary period at Kauśāmbī (Sub-Period VI) is also double pointed as reported from the Kushāṇa period at Sonkh.

Hair Pins: - Two types of bone hairpins have been recovered from the Kushāṇa period at Sonkh- undecorated and decorated. One finely shaped undecorated hair pin unearthed from the Kushāṇa period (Level 22) at Sonkh has slender body and thickened rounded ends. It is 8.7 cm in length. (Pl. CXCV, 3) Another conical shaped hair pin unearthed from the Kushāṇa period (Level 20) at Sonkh is decorated with incisions. It is 8.5 cm in length. (Pl. CXCV, 4)

Double pointed bone arrow heads and plain as well as decorated bone kohl-sticks and bone beads have been reported from the Kushāṇa period at Mathurā.
SHELL OBJECTS:

Bangles: - Excavations at Sonkh have yielded altogether three hundred forty nine fragments of shell bangles from the Mitra to the Kushāṇa periods. One such shell bangle unearthed from the Kushāṇa period (Level-18) at Sonkh is decorated with horizontally incised lines and two jewel shaped projections. It measures (6.4X1.4) cm. Shell bangles have also been reported from the Kushāṇa period at Mathurā.

Shell bangles have also been found from the contemporary periods at Kauśāṃbi (structural Sub-Periods V-VIII) and Taxila (Phases II-IV). Excavations at Shaikhan Dheri in the Swat Valley yielded large numbers of shell bangles having parallel incised lines and different geometrical motifs almost similar to the decorated specimen from Sonkh.

Beads: - Shell beads have been found from the Kushāṇa period at Mathurā and Sonkh. Altogether sixty two shell beads have been reported from various periods at Sonkh. Among them forty three specimens are found from the Kushāṇa period. The main represented shapes found in this shell beads are- i) spherical (4), ii) spheroid, wedge-shaped (1), iii) long barrel circular/elliptical/square (5), iv) barrel, wedge-shaped, circular/triangular (13), v) short cylinder (1), vi) cylinder, wedge-shaped (1), vii) oblique cylinder (1), viii) barrel disc (2), ix) cylinder disc (2), x) oblique cylinder disc (2), xi) oblate disc (1), xii) truncated pyramid disc square (1), xiii) lenticular disc heptagonal (1), xiv) flat square (2), xv) big irregular (1), xvi) irregular trapezoid (1), xvii) irregular wedge-shaped (1), xviii) irregular globular (1), xix) toggle (2). Three selected shell beads unearthed from the Kushāṇa period at Sonkh are illustrated below-

1. Shell bead of short cylindrical shape has been unearthed from Level 21 at Sonkh. It is grey-brown in colour, 0.92cm in diameter and 0.74 cm in length. (Pl. CXCVI, 1)
2. Rectangular flat shell bead with rounded section has been unearthed from Level 16 at Sonkh. It is dark grey in colour, 1.1 cm in length and 0.9 cm in width. (Pl. CXCVI, 2)

3. Toggle shaped shell bead of white colour has been found from Level 18/17 at Sonkh. It is 1.1 cm in length and diameter varies between 0.35 cm and 1.2 cm. (Pl. CXCVI, 3)

Excavations at Mathurā have also yielded a numbers of shell beads from the Kushāṇa period. (577)

Shell beads of different shapes have been found from the contemporary period at Kauśāmbī (Sub-Periods V-VIII, A.D.25-325 A.D.) and Taxila (Phases II-IV, beginning of the Christian era to 200 A.D.) The shapes of shell beads, comparable to those of Sonkh, are - short cylinder, barrel disc, cylinder disc, lenticular disc etc.

**Pendants:** - Two pendants of shell have been found from the Kushāṇa period at Sonkh. One is a simple pendant and another is an animal skull pendant. (580)

**IVORY OBJECTS:**

Excavations at Mathurā have yielded an ivory comb (Pl. CXCV, 6), an ivory stand and ivory beads from the Kushāṇa occupational period. (581)

Almost similar type of ivory comb has been reported from the contemporary period at Shaikhan Dheri in the Swāt Valley. Shaikhan Dheri example is also undecorated as the Mathurā specimen and has straight top and sides. (582) A beautifully decorated ivory comb has been found from a pit contemporary to Phase III (latter half of the 1st century A.D.) at Taxila (Sirkap). (583) The comb is decorated with human and animal motifs in different poses. Similar types of depictions have been noticed in the ivory plaques found at Begrün in Afghanistan. (584)
Although, such types of depictions have not been found in any ivory objects of Mathurā, scholars have opined that both the specimens from Taxila and Beigrām had been influenced by the Mathurā art tradition and thus could have originated from the Mathurā region.

Excavations at Kauśāmbī have yielded an ivory stand (as like Mathurā) from the period just prior to the Kushānas (structural Sub-Period IV). This was probably used as a handle for mirror or lamp-stand. Excavation at Hastināpura has yielded part of an ivory mirror-handle from the Kushāna period (Period IV). From the morphological point of view the Hastināpura specimen could also be identified as an ivory stand, used as a handle of a mirror.

**GLASS OBJECTS:**

**Beads:** - Glass beads were abundantly reported from various excavated sites of the Ganga valley. Altogether two hundred one glass beads have been reported from various periods at Sonkh. Among them one hundred thirty three specimens belonged to the Kushāna period. On the basis of colours such beads of the Kushāna period can be divided into following categories –

**Green Glass Beads** – Altogether forty four beads of green glass have been found from the Kushāna period at Sonkh. The representative shapes in these beads are – i) spherical/spheroid (3), ii) Elliptical with chamfered rim (1), iii) cylindrical (2), iv) oblique cylindrical (1), v) long barrel circular or elliptical (12), vi) short barrel rectangular (1), vii) barrel, flattened hexagonal (1), viii) barrel (3), ix) short flat barrel with rims (1), x) circular flat with rims (3), xi) irregular circular (3), xii) prism hexagonal (1), xiii) bicone (4), xiv) long pyramid rhomboid (1), xv) truncated bipyramid square (1), xvi) lenticular (2) and xvii) annular (4). One green glass
bead unearthed from Level 21 at Sonkh has thick rims that are circular in shape, 1.8 cm in length and 1.3 cm in width. Green glass beads have also been reported from the contemporary period at Kauśāmbī (Sub-Periods V-VI), Taxila (Phases II-IV). The shapes almost similar to those of Sonkh are spherical/spheroid, cylindrical, long barrel circular, barrel hexagonal, biconical etc.

**Blue-Green Glass Beads**—At least twenty four beads of blue-green glass have been reported from the Kushāṇa period at Sonkh. The representative shapes of these beads are -i) long cylindrical (2), ii) small long cylinder (3), iii) long cylinder with rims (1), iv) short cylinder (2), v) oblique short cylinder (5), vi) long barrel hexagonal (1), vii) short barrel with one rim (1), viii) half barrel circular (1), ix) ellipsoid (1), x) biconvex circular (2), xi) biconvex disc circular (3), xii) lenticular circular (2). One bead of blue-green glass (Pl. CXCVI, 5) has been unearthed from Level 21 at Sonkh. It is circular-lenticular in shape and 0.95 cm in length.

**Blue Glass Beads** — At least forty three beads of blue glass have been unearthed from the Kushāṇa period at Sonkh. The representative shapes of these beads are –i) spherical (6), ii) long cylindrical (2), iii) cylindrical with convex ends (7), iv) short cylinder (4), v) oblique cylinder (1), vi) long barrel circular or elliptical (1), vii) short barrel circular (8), viii) barrel hexagonal (1), ix) barrel circular (2), x) cubical (2), xi) prism tetragonal (1), xii) prism pentagonal with convex ends (1), xiii) truncated cone (1), xiv) pyramid square, xv) ellipsoid (1), xvi) irregular circular (4). One spherical bead of blue glass has been unearthed from Level 21 at Sonkh. It is 0.9 cm in diameter. (Pl. CXCVI, 6)

Blue glass beads have also been reported from the contemporary period at Kauśāmbī (Sub-Periods V-VII), Taxila (Phases I-III) and
Ahichchhatra\(^597\) (Stratum IV). The shapes almost similar to those of Sonkh are- Spherical, long cylindrical, short cylindrical, cubic etc.

**Black Glass Beads** – At least nine beads of black glass have been recovered from the Kushāna period at Sonkh. The representative shapes of these beads are – i) spherical (2), ii) spheroid with white stripes (1), iii) long cylinder with rims (1), iv) small oblique cylinder (1), v) short barrel circular (1), vi) small barrel irregular (1), vii) barrel with one rudimentary rim, curled (1), viii) long segmented tube (1).\(^598\) One glass bead of curled black with white stripes has been unearthed from Level 21/20 at Sonkh. It is barrel circular in shape and has one rudimentary rim. It is 1.05 cm in diameter.\(^599\) (Pl. CXCVI, 7)

Black glass beads have also been reported from the contemporary period at Kauśāmbi\(^600\) (Sub-Periods V-VII) and the shapes are almost similar to those of Sonkh - spherical and small cylindrical.

**Yellow Glass Beads** – Only two glass beads of yellow colour have been reported from the Kushāna period at Sonkh. The representative shapes in these beads are – i) long segmented circular tube (1) and ii) small annular (1).\(^601\) One bead of yellow glass (Pl. CXCVI, 8) with oblate shape, low rims has been found from Level 19/18 at Sonkh. It has gilt surface and striated marks on the body. It is 0.7 cm in diameter and 0.6 cm in length.\(^602\)

**Millefiori Glass Beads** – Five glass beads of millefiori colour have been found from the Kushāna period at Sonkh. The representative shapes in these beads are – i) flat barrel shaped with collars (3) and ii) circular flat (2).\(^603\) One bead of millefiori glass of circular flat shape has been unearthed from Level 18 at Sonkh. It is blue-green in colour with red-
white-black wavy hatchings on the body. It is 0.9 cm in length and 0.25 cm in diameter.\textsuperscript{604} (Pl. CXCVI, 9)

Gold-foil Glass Beads- Six beads of gold-foil glass have been unearthed from the Kushāṇa period at Sonkh. The representative shapes in these beads are –i) spherical with one rudimentary rim (2), ii) oblate with short rims and having striation marks (1) and iii) short barrel shapes with rims (3).\textsuperscript{605}

Spherical gold-foil glass beads have also been reported from the contemporary period at Kauśāmbi\textsuperscript{606} (Sub-Periods V-VII).

Pendant: - One dagger or spindle pendant of green glass has been unearthed from the Kushāṇa period at Sonkh.\textsuperscript{607}

The raw materials for the manufacture of bone, shell, ivory and glass objects have been procured from various sources. Bone and ivory were either obtained from domestic animals or from animals in the surrounding forests.\textsuperscript{608} Molluscs shells which are mostly used for jewellery and other objects may have been brought from the Ganga delta or from coastal regions of Sindh.\textsuperscript{609} The raw materials for glass could have been obtained from glass sand available in Sawai Madhopur, Bindi, Jarwara regions of Rajasthan\textsuperscript{610} or from the white friable quartzite deposits in Allahabad- Banda-Varanasi region of Uttar Pradesh.\textsuperscript{611}

From the brief discussion of such miscellaneous objects (in forms of bone, shell, ivory and glass objects) we may put forward some observations-

1. We have meagre information regarding the number of bone, shell and ivory objects recovered from the Kushāṇa period at Mathurā and Sonkh.
2. Bone objects include styli, hair pins, arrowheads, kohl-sticks and bone beads. Styli, hair pins, kohl-sticks and beads were probably used as ornamental/toilet objects and arrowheads were used for hunting purposes.

3. Shell objects were found in forms of bangles, beads and pendants, probably used as ornamental objects.

4. Ivory objects were found only in forms of ivory combs and ivory stands and ivory beads. We have meagre information about the ivory objects reported from the Kushāṇa levels at Sonkh. Ivory comb was probably used as toilet/luxurious object, ivory stand was probably used for miscellaneous purposes (may be used as a mirror stand) and ivory beads were used as ornamental objects.

5. Ivory sculptures were found in considerable quantities during the Kushāṇa period at various sites of the Gandhāra region and in Begrām. Surprisingly, as one of the most important centres of the Kushāṇa rule, Mathurā did not have any evidence of such ivory sculpture.

6. Glass objects were like glass beads were probably used as ornamental objects. A number of glass beads have been found from the Kushāṇa period at Sonkh.

7. Our study indicates continuity and change of certain miscellaneous objects/artefacts from the earlier to later times. Bone styli have been found from the Mitra levels (Period III) at Sonkh. Bone hairpins probably continued from the Mauryan period (Period II) at Sonkh. At Mathurā bone arrowheads continued from Period I. From Period II double pointed arrowheads became popular at Mathurā, which continued up to the Kushāṇa period. Bone kohl-sticks were probably continued from Period II at Mathurā. Shell beads continued from Period II at Sonkh and Period III at Mathurā. At Mathurā ivory beads continued to be found from Period III. With a greater concentration
in the Kushāna period (Period V), glass beads continued to be found from Period II-Period VIII at Sonkh. At Mathurā glass beads continued to be found from Period III.

8. Almost similar types of bone, shell, ivory and glass objects have been found from the contemporary period at Kauśāmbī (bone styli, shell bangles, shell beads, glass beads), Hastināpura (ivory mirror-handle or ivory stand), Taxila (shell bangles, glass beads) and even at Shaikhan Dheri (shell bangles, ivory combs) in the Swat Valley. In one hand occurrences of such objects at other sites indicate increase of trade with other areas and on the other hand extension of similar tradition in other sites of the Ganga valley and north-western provinces.

The above discussion on the findings in form of terracotta, metal, stone and miscellaneous objects provide enough scope to explore the idea about the genesis of art activities as well as the technological status of the Kushāna period experienced by the people in and around Mathurā. It is also true that our major objectives never incorporate the vivid descriptions of terracotta objects and the information about metal, stone and miscellaneous objects. The chapter explores some aspects of technological evolution related to the consumption of terracotta, metal, stone, bone and ivory objects. On the other hand there are certain points which highlight the limitation of our database, particularly the absence of Mathurā excavation report.

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