

N

Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution



Alok Kumar Kanungo^{1,2}, Chinmay Kulkarni³,
Varad Ingle⁴ and Oishi Roy¹

¹Archaeological Sciences Centre, Indian Institute of Technology Gandhinagar, Gandhinagar, Gujarat, India

²College of Humanities, Arts and Social Sciences, Flinders University, Adelaide, Australia

³Civil Engineering, Indian Institute of Technology Gandhinagar, Gandhinagar, Gujarat, India

⁴Materials Science and Engineering, Indian Institute of Technology Gandhinagar, Gandhinagar, Gujarat, India

Introduction

Ceramics is the most abundantly found artefact at an archaeological site and is a useful tool in seriating and co-relating cultural deposits. Furthermore it also aid in establishing relative chronologies. It acts as a prime marker for a period of occupation and the palaeontologist's term "index fossil" was borrowed to describe a pottery type having a short vertical range, indicating a short period of manufacture. Northern Black Polished Ware (NBPW) is one such ceramics, which was produced in limited quantity using a specific technique

and traded to far off places from its place of origin, i.e., Ganga Yamuna doab. Thus it is of immense importance in understanding the then culture contact and the societal hierarchy.

Definition

As NBPW was discovered for the first time from the northern part of India; and due to its black color and polished/glazed appearance it was named as Northern Black Polished Ware. Although the surface color of 90% of NBPW borders around jet black and brownish black, the remaining 10% range between gold, gold-blue, silver, pink, brown black, steel blue, bronze, orange, purple, deep red, violet, etc. Excavations at Kausambi and Rajghat in Uttar Pradesh, Rajgir, Sonapur, Chirand, and Oriup in Bihar, Chandrakhetgarh, and Mangalkot in Bengal and several other sites yielded such varied NBPW sherds. Similarly the finds of NBPW is neither limited to north India nor the polish and glaze has been consistent throughout. Agrawal (2009) rightly said, NBPW is an enigmatic ceramic and its very name is a bit anachronistic because it is neither northern, nor polished, nor even black! In spite of this fact the frequency of black shade and color is significantly higher than other shades and color, regarding, the term "polished" used in its nomenclature it may be said that irrespective of shades and color its quality is more or less constant wherever it is found.

Historical Background The introduction of NBPW marked the beginning of Second Urbanization in the Ganga plain and it coincides with Buddhist archaeology, introduction of coinage, and art of writing in the middle Ganga plain. (Middle Ganga Plain occupies the eastern portion of the state of Uttar Pradesh and Bihar. It covers about 600 km east-west and about 330 km north-south direction. Its north and south boundaries are well defined by the Himalayan foothills and the peninsular point respectively.) Hence, it marks a new era of not only in the field of ceramic industry but also in respect of ancient polity, formation of states/Janpadas (Janapadas and Mahajanapadas were 16 kingdoms or oligarchic republic and can be dated to sixth to fifth century BCE, better known as Second Urbanization), socioeconomic and cultural history of Indian subcontinent.

Well known archaeologist B.B. Lal (1975) has associated NBPW with Ramayana as “Deluxe Table Ware.” (Great Indian Epics comprise of Ramayana and Mahabharata which were originally composed as Kavyas /Prose in Sanskrit language and later translated into many other Indian languages.) According to him the presence of “deluxe ware” coupled with the evidence of city architecture points to the royal supremacy reigning in the Middle Ganga plains. Many a scholar associates the ware with early Buddhism. (Buddhism is a spiritual order comprising of traditions, teachings, and practices based on the principles of Gautama Buddha.)

What distinguishes NBPW from black-slipped ware is the sheen on its surface. The gloss and the fabric reflect the usage of this type of pottery as a deluxe ware. NBPW was highly valued, perhaps it was limited for elite usage, which is indicated by its limited and fragmentary finds. Some interested finds are those of specimens where fragments have been repaired with copper rivets, fillets, or pins. Ropar in Punjab, Bairat in Uttar Pradesh, and Sonepur, Juafardif, and Kumrahar in Bihar are some of the sites where such repaired NBPW are found. This suggests that NBPW vessels with minor breakage were not usually thrown away after they had been damaged but were used after

repairing. Since these repair evidences are found even during the peak period of NBPW, it reflects that the repair cost would have been less than the cost of getting a new vessel (Rahman 1998: 75–93). In most probability NBPW had become an integral part of the then culture in the specified cultural zone whereas the production knowhow of the same had been kept secret among a few. Thus use of the same after repairing could have been the method of recycling in the absence of the knowledge of production. Similar is the case of NBPW manufactured in the form of figurines. NBPW figurines is a rare occurrence and two such find was recovered from the site of Kopia (Sant Kabir Nagar District, Uttar Pradesh) from NBPW level (Kanungo 2013: 447–448, Fig. 1).

Chronology

A number of archaeological explorations and excavations conducted in different parts of India have brought to light a number of sites yielding NBPW. Preceding and succeeding deposits of NBPW exposed various types of potteries that helped archaeologists in framing chrono-stratigraphically position of cultural sequence in respect of ancient India. The pre-NBPW wheel thrown pottery types have been Ochre Colored Pottery (OCP) followed by Black-and-Red, Painted Grey Ware (PGW), and contemporary to NBPW has been many led by Red lustrous/polished ware.

PGW is approximately dated to 1200–800 BCE. The classical period of NBPW is between 700 and 200 BCE. For the next 200 years, it remained in circulation in a limited quantity and by 200 CE few sherds of NBPW were found in places. The peak period of NBPW was 500–300 BCE. Even during the peak period, NBPW comprised only of about 5% of the ceramic assemblage. During this period, the bulk of the ceramic assemblage comprised of PGW, plain grey ware, Fine Red Slipped Ware, Red Slipped Ware, Red Ware, Fine Black Slipped Ware, Black Slipped Ware, and Black and Red Ware. In the late phase of NBPW, the associated



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Fig. 1 A terracotta Ram from Kopia, with NBP Finish

wares were of inferior quality which comprised of coarse grey ware, unslipped red ware, etc.

NBPW has been reported in abundance in association with Punch marked coins and un-inscribed cast coins in the majority of the excavated sites. The date of these coins is normally between the sixth and second century BCE.

First Find and Features of NBPW

What is known as NBPW today, was first found by Sir John Marshall (1908: 59) in 1904–1905, at Sarnath near Varanasi, and thereafter, in 1909–1910 at Bhita near Allahabad (Marshall 1910: 40, 1911–12: 37–81). He described the ware as fine Black Lustrous Ware. Marshall (1951: 432) and when similar ware was recovered from the lower level of the Bhir mound excavation at Taxila, he classified this ware as Greek Black Ware and was unsure about the origin of this ware. In 1946, Wheeler and Krishna Deva described its distinctive fabric, as made of fine levigated clay, usually grey but sometimes reddish in section, with a brilliantly burnished slip of the quality of

glaze, ranging in color from jet black to grey and a metallic steel blue, occasionally varied with reddish brown patches. They coined the ware as “Northern Black Polished Ware” and suggested the Ganga basin as its main center. Lal (1954–55: 50–52) gave more precise and detailed definition as NBPW having usually thin section, grey core, and distinctive glossy luster.

Epicenter

Though middle Ganga plain has been accepted as the place of NBPW yet there have been contradictory claims, regarding the epicenter of the ware. While scholars like B.P. Sinha (1997), Sachchidanand Sahay (1969) are of the view that the epicenter of the ware would have been around Pataliputra (Patna) and, on the other hand, scholars like G.R. Sharma (1960) proposed Kausambi as its epicenter. Even though early dates of NBPW come from Bihar but on the basis of distribution Uttar Pradesh surpasses Bihar.



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Fig. 2 A northern black polished ware dish, found at Kopia



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Fig. 3 Northern black polished ware set (G.G. Majumdar Collection)

NBPW Shapes

NBPW does not include any large or heavy forms but mostly confined to usual dining set and table wares. The dominating shapes are dishes with inverted or straight sides; bowls with straight, convex, corrugated or tapering sides; lids with flat terminal; and sharply carinated *handis* (Figs. 2 and 3). (*Handi* is usually a deep, wide-mouthed cooking vessel, originating from the Indian subcontinent, specifically used in north India, Pakistan, and Bangladesh. Some specific

dishes from the Indian subcontinent are cooked in this vessel.) Other shapes that have been reported are bottle-necked or spouted jars, knobbed lids, saucers, small vases with varying rim forms and conspicuous necks, and *surahi*. (An Indian clay pot with long neck usually used for storing liquid such as water or alcohol.)

A general picture of shapes under this ware has been well documented and illustrated by Nigam (1961: 40–44). He described varied shapes of 42 bowls, 12 dishes, 3 jars, 3 lids, 1 *handi*, 1 spout, 1 probable basin, a tumbler like vessel

having flaring mouth, and a few base fragment of stand.

NBPW Phases

Phases of NBPW period is divided, normally into two subperiods Early and Late (Roy 1983). Yet Sinha (1979, 1997) has divided the period of NBPW into three subperiods, i.e., Phases A, B, and C.

Phase A	Early NBPW	c. 700–350 BCE	Good quality and variety of NBPW Presence of miniature pots with incurved rim and flat base
Phase B	Middle NBPW	c. 350–230 BCE	Mostly in black color Spread of ware to various parts of the subcontinent, such as in Deccan, eastern Bengal, north-west India, and Swat valley Carinated <i>handis</i> , pear shaped vases and flat based bowls are the principal types
Phase C	Late NBPW	c. 230–175 BCE	With the end of the Mauryan dynasty, the vigor of the NBPW Culture-complex started disappearing The NBPW became of inferior quality and lustrous polish diminished

Production Method

Manufacture of NBPW required technological know-how which we are unable to replicate even after several attempts at experimental replication. It was not only the combinations of technical knowhow of required temperatures but also

practical knowledge about the techniques involving specific organic material(s), application of slip (s), and firing temperatures (in stages) but something else which has been eluding us since the first NBPW was encountered.

Technologically, NBPW is among the finest pottery ever produced not only in ancient India and South Asia, but also one of the best in the entire Old World. Turned on a fast wheel, it was fired in a sagger-kiln at high to very high temperatures and cooled in a reduced atmosphere (Rowson 1953). It is made of fine-grained clay and with almost negligible tempering material. The gloss or surface coating used in the production of NBPW has been addressed through several hypotheses; however, there is hardly any accepted theory about it (Agrawal 2009), three prominent ones are:

1. NBPW contained ferruginous (iron oxide or rust) compounds applied to their molds and then fired. The black color was formed once the compound got fired in a reducing condition. Magnetic iron oxide, liquid clay, hematite, and a natural alkali were applied before reduction firing. The glossy finish comes from the iron oxides and the rest contribute to the shine.
2. This condition (reduction) in the kiln has more fuel than air, thus lacking oxygen for complete combustion.
3. Oil or plant juice was applied post firing the pots, while they were still hot.

Core and Fabric Classification

On the basis of core, fabric and slip NBPW has been segregated as Deluxe, Semi-deluxe, and common varieties.

Invariably the core is made of very fine well-levigated clay with little tempering material and it is of light grey color (post-firing). But in some cases, reddish varieties have also been noticed. It has a strikingly lustrous surface. The clinging sound which is marker of the metallic nature of this ware is probably due to absence of any remanence of inorganic substances.

Roy (1983) classified NBPW into five fabrics. The same was later updated by Sinha (2001) and Ahmed (2015):

Fabric A	Fabric is hard and compact; it is called deluxe ware. Thin section, fine, hard and dense, and its surface is difficult to mark. Shapes associated with this form are corrugated or flanged bowls but no dishes. The type abounds in the early NBPW period
Fabric B	Fabric is not as hard and compact as Fabric-A and sherds are comparatively thick and the glossy surface can be scratched with a knife. At times it is tough to differentiate these sherds from Black-slipped Ware. But the shapes of the two, are totally different from one another. The notable shapes of this variety are dishes and a few bowls. Bowls are generally straight sided, carinated, and sub ovaloid in shape
Fabric C	Below the shining black slip, red, buff or orange yellow matt surface is visible. The slip itself peels off more easily than the other types. The core of the pots remained red, unlike those of Fabric A and B where the core is grey
Fabric D	Core of the sherds are usually black and red, thin in section, and have lustrous finish similar to the fabric A and B. Only bowls and dishes are found in this fabric
Fabric E	This is a coarser variety of NBPW. Section is thick, the surface is dull black or grey, and rarely lustrous. It appears to have been fired at a lower temperature than other types and its surface could be described as a wash or self-slip. This is the coarsest of the NBPW assemblage which predominate the Late NBPW levels. The remarkable forms were debased-small bowls and dishes in considerable proportion, and restricted number of vases, basins, and carinated <i>handis</i>

Bichrome NBPW

The bichrome variety NBPW exhibits the combination of two colors. The designs in color are set off against the other. These designs appear to have been copied from PGW designs. Some sherds with horizontal division of the two colors have been reported from Sravasti and Rajghat in Uttar Pradesh, and Champa and Manjhi in Bihar. The

most common types in this group were the sherds in which designs are executed in black against the red, or red against the black without any overlap between the two. The other combinations of colors were dark steel blue which was set off against red, grey against light red, black against dark brown, and black against ash-grey (Roy 1978–79: 108–109). The bichrome variety shares all the features of the monochrome group, except that it shows a combination of two colors; these can be dark steel blue and deep red, grey and light red, black and dark brown, black and brown, black and pale red, and black and ash grey.

Painted NBPW

NBPW is sometime found with painted designs on the surface with yellow and vermilion (e.g., Hastinapur, Kaushambi, Sravasti, and Lahuradeva in Uttar Pradesh and Bahal in Maharashtra). The painted motifs range from horizontal bands, vertical strokes, vertical strokes coming out of a horizontal band, transverse band or strokes, dots, concentric circles, arches, loops to wavy lines executed in black, cream, blue, and dark brown colors. In addition to painting, incised designs and graffiti marks are also occasionally found on NBPW.

Chronology of NBPW

Antiquity of NBPW is ever evolving. As of today the earliest date, i.e., 1200 BCE for NBPW is reported from the period II at the site of Juafardif in Nalanda district of Bihar (Saran et al. 2008). The NBPW period at Ayodhya (ASI 2003) is assigned to c. 1003 to 300 BCE. However, on the basis of majority of dates and sites material equipment, stratification and associated finds, Ahmed (2015) revised the accepted time bracket of seventh to second c. BCE to 700–50 BCE for the NBPW with following chronology for earlier discussed fivefold fabric classification:

Stage I	c. 700–600 BCE
---------	----------------

(continued)

Stage II	c. 600–500 BCE
Stage III	c. 500–400 BCE
Stage IV	c. 400–200 BCE
Stage V	c. 200–50 BCE

Distribution Through Time and Space

The spatial distribution of NBPW is not limited to present day political boundary of India but has been found in several regions of Bangladesh, Pakistan, Nepal, and Sri Lanka too. The northernmost site of NBPW is Udegram in Pakistan, the southernmost site is Anuradhapura in Sri Lanka, the westernmost site is Prabhas-Pathan in India, and the easternmost site is Wari-Bateshwar in Bangladesh (Haque et al. 2001: 11–40).

There are two lists of NBPW finds, firstly by Roy (1986) who referred to 415 NBPW sites and secondly by Ahmed (2015) who listed 617 NBPW sites.

Key Issues

There have been few attempts to make a comprehensive study of NBPW finds and map the same through its time and space in India. This paper is an attempt to compile all available references of NBPW and map them according to time and space. The official annual report of Archaeological Survey of India, i.e., *Indian Archaeological: A Review*, and the four leading Indian archaeology journals *Ancient India*, *Puratattva*, *Man and Environment*, and *Pragdhara* are consulted for the work. Important NBPW findings and absolute dates reported in individual publications are also included. Although all efforts were made to make this survey of NBPW present in ancient India as exhaustive as possible, yet it might have missed some evidences appearing in publications without having reference in the cited periodicals and books.

It is fair to note that the summaries/descriptions in *Indian Archaeology: A Review* itself are generally very short and are preliminary in nature. They are not necessarily the final output of any

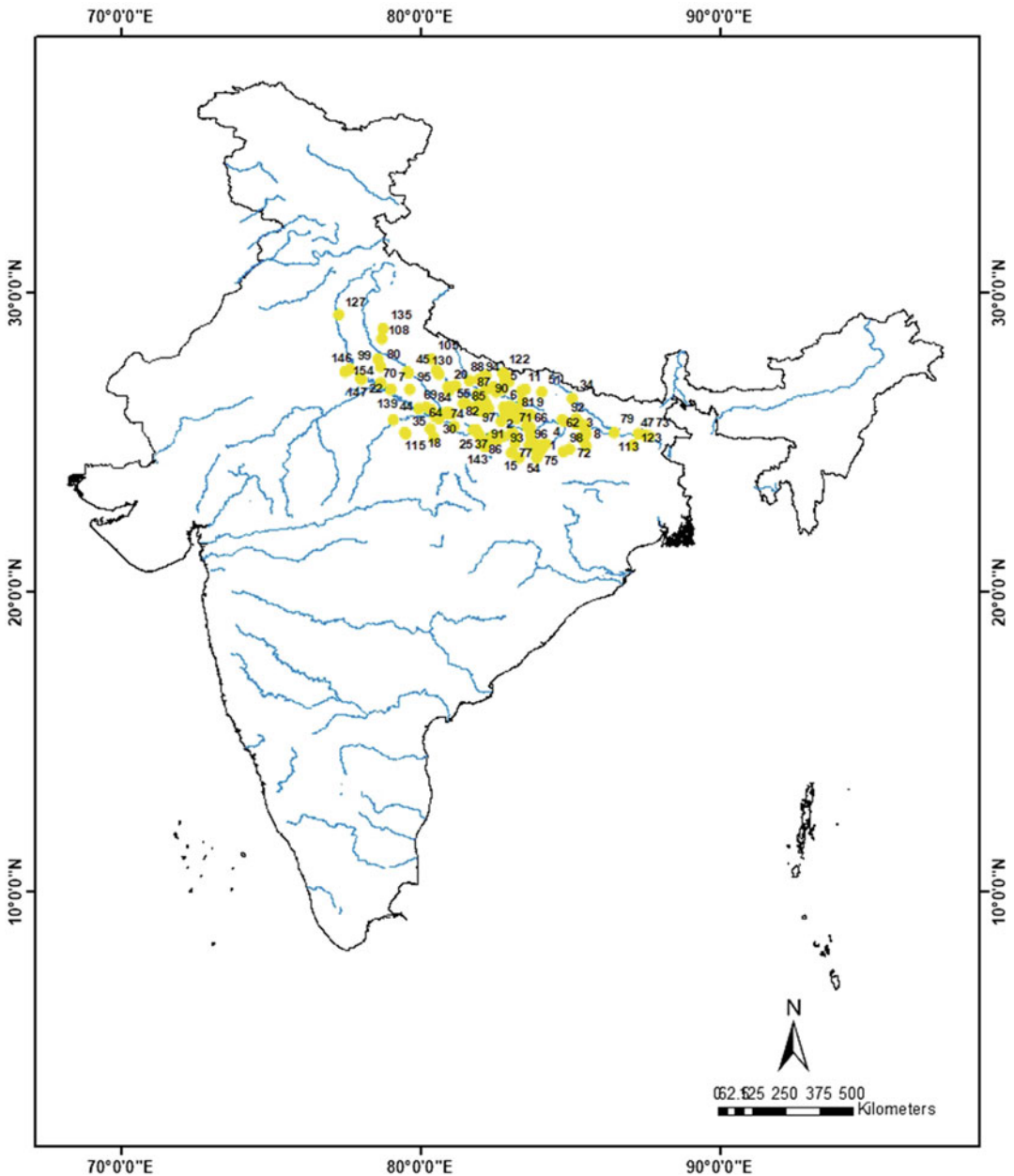
excavation's result, therefore information acquired to plot the maps must be used critically. However, in most cases, the final reports have not yet seen the light of the day. There is every possibility that a respectable number of reported NBPW findings are not NBPW but black ware or black slipped ware.

In order to better visualize the distribution of NBPW through time and space, all NBPW yielding sites were mapped. To map the sites first the sites were categorized according to time chronology and then the longitude and latitude of each site were determined and fed in an excel sheet. Maps denoting occupation of different time periods were prepared using the ArcMap software.

Three major challenges faced are:

1. Quite often NBPW finding layer is dated relatively rather than using any absolute scientific method.
2. Dating of many of these NBPW sites was done based on the associated wares found alongside NBPW. The ceramic chronology of middle Ganga plain is well established whereas in Madhya Pradesh it is yet to be finalized (post Chalcolithic ceramics in Madhya Pradesh is found directly in the early historic level at about 600 BCE without any antecedent evidence). The ceramic chronology in other parts of India where NBPW is found is far from standardized in comparison to middle Ganga plain. In a respectable number of reports, sites have been loosely mentioned as NBPW sites without evaluating the evidence at hand.

The first group (Map 1) maps all the NBPW sites in association with the wares (Black and Red Ware, Black Burnished Ware, Coarse Grey Ware, Cord Impressed Pottery, Coarse Red Ware, Dull Red Ware, Black Slipped Ware, Black Ware, Fine Grey Ware, Grey and Red Ware, Plain Grey Ware and Plain Red Ware) which continued from pre-NBPW period in middle Ganga plain. Likewise the second group (Map 2) maps all the NBPW sites which fall in the time bracket of 700 BCE to 300 BCE either on the basis of absolute dates or associated wares and/or coins. This time bracket was taken into consideration so as to understand



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 1 Distribution of NBPW, pre 700 BCE.

1. Adampur, 2. Agiabir, 3. Ajaypur, 4. Akorhi, 5. Ammadei, 6. Andika, 7. Anguthia, 8. Apsad, 9. Ardauna, 10. Ashrafpur, 11. Atnariian, 12. Ayodhya, 13. Baghera Kalan, 14. Bahua, 15. Bahuwara, 16. Baira Dumuhwa, 17. Bairala, 18. Banda, 19. Banimilia Bahera, 20. Bara Imambara, 21. Baragaon, 22. Basai, 23. Belhari, 24. Bhaderea, 25. Bharadvaja Ashram, 26. Bharuli, 27. Bhisara, 28. Bhismapur, 29. Bihuri, 30. Bindaur, 31. Chakki, 32. Chandaura, 33. Chharauncha, 34. Chorma, 35. Dadari, 36. Dakhinwara, 37. Dariabad, 38. Deodiha,

39. Deomackandey, 40. Dhappa, 41. Dharhni, 42. Diaon, 43. Digghi, 44. Erich, 45. Fatehgarh, 46. Fatehpur, 47. Fauzdari, 48. Gajahar Mau, 49. Ganjaura, 50. Ganwaria, 51. Garah, 52. Garha, 53. Gauna Ghat Ranijot, 54. Gerar, 55. Ghatampur, 56. Ghosi, 57. Godhana, 58. Gogaon, 59. Gokula, 60. Gorasara, 61. Gulrihva Ghat Gobhia, 62. Hassanpur Bhadwar, 63. Hazipur, 64. Husainganj, 65. Imadpur, 66. Imiliadih, 67. Isauli, 68. Itasvagarh, 69. Jahagirabad, 70. Jakhera, 71. Jamalpur, 72. Jaugambhari, 73. Jhimjhimia Kalisthan, 74. Kabra, 75. Kabra Kala, 76. Kachawa, 77. Kamhari, 78. Kanneri, 79. Karna Chaura, 80. Katinga, 81. Khas, 82. Kithawan, 83. Kohadia, 84. Kora, 85. Kura, 86. Kurain, 87. Kuri Diha, 88. Lavada Diha, 89.

the distribution of the NBPW before the Mauryan period. The third group (Map 3) maps all the NBPW sites which falls in the time bracket of 300 BCE to first century CE, on the basis of absolute date, associated coins, figurines, and wares. This map gives an idea of spatial distribution of NBPW during the Mauryan and post-Mauryan period when Buddhism and trade got respectable patronage. The last group (Map 4) maps the NBPW sites of Sunga-Kushana time period when the ware remained in use but not in production and eventually went into oblivion.

Since it is well established that NBPW is primarily a ware of middle Ganga Plain and it travelled to other regions not before 700 BCE, all reported NBPW finds in association with Painted Grey Ware (PGW) in northern India is placed under the bracket of 700–300 BCE.

The entire data are plotted in four different maps (Maps 1, 2, 3, and 4). Due to dense concentration of the sites in the NBP region, the maps prepared show all the sites but the respective numbers of only selected sites are visible. However, all the names are listed in the captions.

The number of sites yielding NBPW in respective states is shown in Fig. 4 and state wise finds as per respective time period are shown in Fig. 5. The reported sites from newly carved state of Jharkhand is treated as that of undivided Bihar in the Figs. 4 and 5.

After careful tabulation of provenances, it is clear that the most number of NBPW sites has

been reported from Uttar Pradesh, closely followed by Madhya Pradesh and in the third position we have NBPW finds from Bihar. And on the basis of time period, the most NBPW finds are from 700–300 BCE which was the early phase closely followed by pre 700 BCE finds and finds from Sunga-Kushana sites.

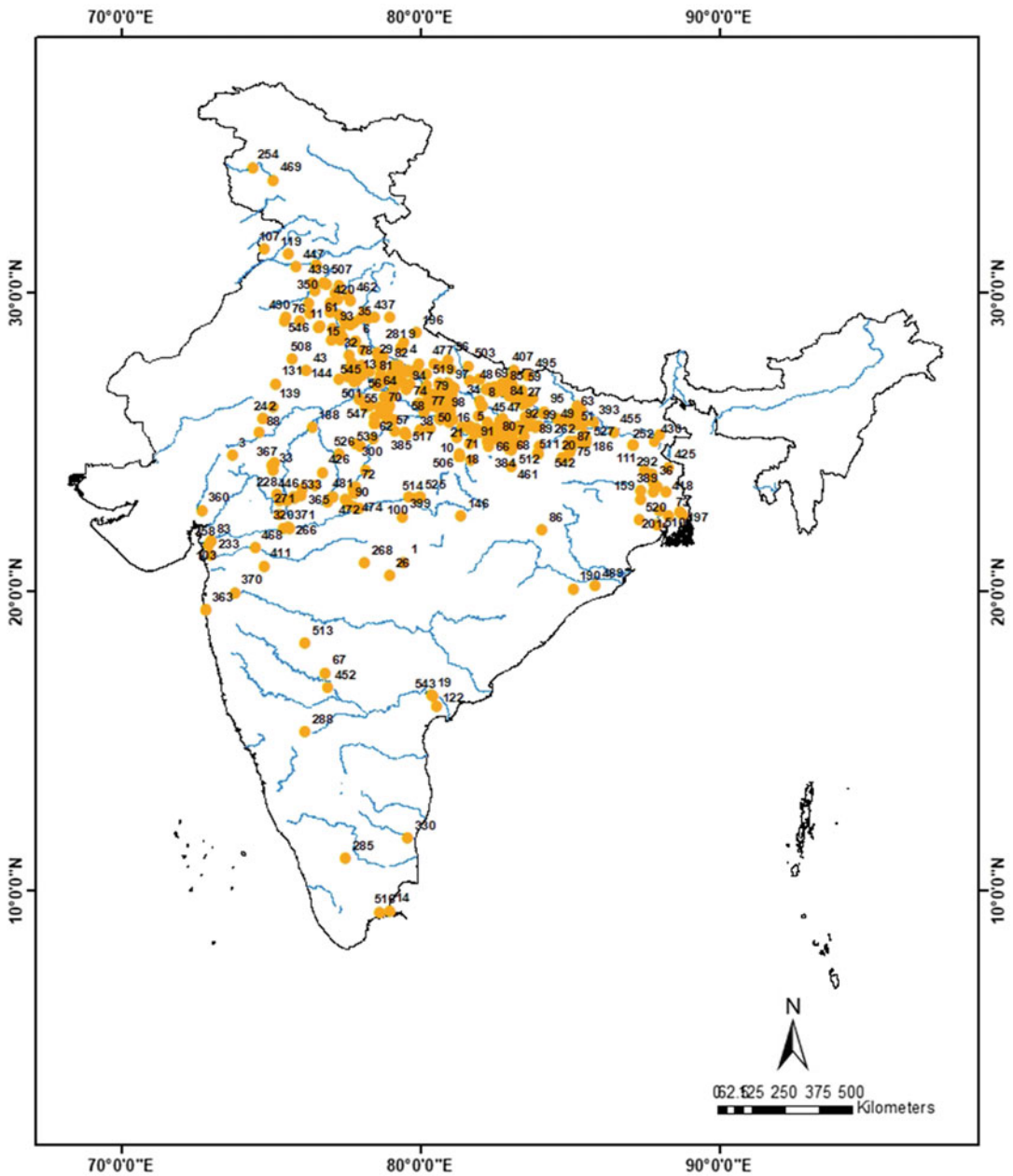
Inferences

Following deductions can be drawn after looking at the base maps

1. Maps of a specific artefact over different time periods show how the cultural significance of this artefact has transformed over time. These maps indicate if the area using these artefacts has expanded or if the users were limited to certain area.
2. As evident from the maps, the NBPW yielding sites are concentrated mainly in the middle and lower Ganga plains.
3. However in comparison to the Ganga plains, very few sites are present in central and southern India and do not show any pattern. They are rather scattered than being concentrated. This indicates that NBPW was not common in central and southern India but was found there probably due to trade relations with the Ganga plains.

Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 1 (continued) Lohradewa, 90. Madahi, 91. Mahal, 92. Maharajganj, 93. Majhwa, 94. Malangasthana, 95. Malhausi, 96. Malhipur, 97. Malkhan, 98. Mangrawa, 99. Mathura, 100. Mirapur, 101. Musaldah, 102. Musanagar, 103. Nagsar Mirray, 104. Nagwa, 105. Nakara, 106. Nalanda, 107. Naraini, 108. Narauli, 109. Nariaon, 110. Naugaon, 111. Nimsur, 112. Nishar, 113. Oriup, 114. Padrian, 115. Paharia, 116. Painkalan, 117. Pakri Chauhan, 118. Panapur Batesar, 119. Pancho Peeran, 120. Parsawan, 121. Pingesar, 122. Pipri, 123. Pirdauri, 124. Prahaladpur,

125. Puk, 126. Purani Payar, 127. Raja Nala ka Tila, 128. Rajghat, 129. Ramchaura, 130. Ramgarh, 131. Rampur, 132. Rekaicha, 133. Revelganj, 134. Sahar, 135. Sambhal, 136. Sapaur, 137. Sarai Hridaya Shah, 138. Saranwan, 139. Saunthra, 140. Senuwar, 141. Shanakardih, 142. Sheogarh, 143. Shivpur, 144. Sikandarpur, 145. Singraur, 146. Sonkh, 147. Sonouthi, 148. Surajbhan Patti, 149. Takia, 150. Teduhar, 151. Telari, 152. Tendhiya, 153. Tilyani Upadhyaya, 154. Tilyani Upadhyaya, 155. Tori, 156. Tulsi Diha, 157. Ultidech, 158. Utarthia, 159. Uttarpara, 160. Vikramaditya



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 2 Distribution of NBPW, 700 to 300 BCE.
 1. Adam, 2. Aguncha, 3. Ahar, 4. Ahichchhatra, 5. Ahmadpur Khaira, 6. Ahmanullapur, 7. Ahraura Dih, 8. Aidhi, 9. Ajaneraghar, 10. Ajargha, 11. Akabarpur Baroth, 12. Akoda, 13. Akos, 14. Alagankulam, 15. Alamgirpur, 16. Allahpur, 17. Ama, 18. Amar Kachh, 19. Amaravati, 20. Amarut, 21. Amil Koni, 22. Anai, 23. Andhedih, 24. Angucha, 25. Aong, 26. Arambha, 27. Araonjagdish, 28. Asohna, 29. Atranjikheda, 30. Attawa,

31. Aurangabad, 32. Awakhera, 33. Awra, 34. Ayodhya, 35. Baghpat, 36. Bahiri, 37. Bahri, 38. Bahua, 39. Bahukashiktaur, 40. Baighar, 41. Baira Dumuhwa, 42. Bairhva, 43. Bairat, 44. Bairat, 45. Bajalha, 46. Bajilkha, 47. Bajra Tiket, 48. Baksari banni, 49. Balandpur, 50. Banda Dih, 51. Bangadh, 52. Banthra, 53. Baraillia, 54. Baraini, 55. Barata, 56. Barauli, 57. Barehat, 58. Barhat, 59. Barhayapar, 60. Barji Mukundpur, 61. Barnawa, 62. Basai, 63. Basarh, 64. Batesvara, 65. Behil, 66. Belan, 67. Benagutti, 68. Benh ki kot, 69. Benipur, 70. Berachha, 71. Berhat, 72. Besnagar, 73. Betor, 74. Betthar, 75. Bhadauni,

Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 2 (continued)

76. Bhadra, 77. Bhadras, 78. Bhadravan, 79. Bhadsa, 80. Bhagwati Devi, 81. Bhanwat, 82. Bhargain, 83. Bharuch, 84. Bharvalia, 85. Bhatolva, 86. Bhavanipur, 87. Bhelavar, 88. Bhilwara, 89. Bhimapur Dih, 90. Bhimbetka, 91. Bhita, 92. Bhitari, 93. Bhorgarh, 94. Bidhuna, 95. Bijalipur, 96. Bilariya, 97. Bina, 98. Bindaul, 99. Birpur, 100. Bhita, 101. Bithur, 102. Bodh Gaya, 103. Broach, 104. Buddhikhas, 105. Budhakhera, 106. Buxar, 107. Chabal Khurd, 108. Chainpurwa, 109. Chak, 110. Chakannagar Kheda, 111. Champa, 112. Chandanpur, 113. Chandi, 114. Chandidiha, 115. Chando, 116. Chandraketugarh, 117. Chandravati, 118. Chandu pura, 119. Charan, 120. Chauharjan, 121. Chauthi ka kot, 122. Chebrolu, 123. Chechar, 124. Chhapra, 125. Chhiat, 126. Chhavani, 127. Chhota Belma, 128. Chibaiya, 129. Chichali, 130. Chirand, 131. Chosla, 132. Churhat, 133. Club Ghar Tila, 134. Daboh, 135. Dadupur, 136. Daindih, 137. Daman Khanda, 138. Dangwada, 139. Dantri, 140. Darau, 141. Dariyapur, 142. Daulatabad, 143. Deeh, 144. Dehra, 145. Deokali, 146. Deopa Chanda, 147. Deoraon, 148. Deori, 149. Deoriya, 150. Deuli, 151. Devachandpur, 152. Dhaneli, 153. Dharamपुर, 154. Dharaut, 155. Dhuri kusi Dih, 156. Dhuriapur, 157. Diguwan, 158. Dih, 159. Dihar, 160. Dih Darari, 161. Dumhara, 162. Durbasa Ashram, 163. Durvasa, 164. Ekalbara, 165. Erachh, 166. Eran, 167. Fatehpur, 168. Fatehpur Buzurg, 169. Fatehpur-Ram, 170. Foujdari, 171. Gadabirghar, 172. Gaka Chak, 173. Galatha, 174. Gandhiawan, 175. Ganjanpur, 176. Ganwaria, 177. Garh Kalika, 178. Garha, 179. Gedar, 180. Ghaijanpur, 181. Gharighat, 182. Ghatampur, 183. Ghatara, 184. Ghespur, 185. Ghuram, 186. Giriak, 187. Gol, 188. Gondi, 189. Gone Umargarh, 190. Gopalpur, 191. Gopalpur Hatkhola, 192. Govindpur, 193. Gudera, 194. Gulzarbagh, 195. Gumad, 196. Gwal maidan, 197. Hadipur, 198. Hakimpur Tahra, 199. Handaur, 200. Hansi, 201. Hariharpur, 202. Harnol, 203. Hasanpur, 204. Hastinapur, 205. Hathras, 206. Hethi Tol, 207. Hindora, 208. Hinetia, 209. Hulaskhera, 210. Huzur Nagar, 211. Idgah, 212. Illahabas, 213. Imlidih Khurd, 214. Itauwa, 215. Itwan, 216. Jabalpur, 217. Jaddappatti, 218. Jaderau, 219. Jagannath Baba, 220. Jajmau, 221. Jakhera, 222. Jamdara, 223. Jamuha, 224. Janso ki Marai, 225. Jarda, 226. Jata, 227. Jauharganj, 228. Jhar, 229. Jhauan, 230. Jhusi, 231. Jiganadham, 232. Jindaur, 233. Jokha, 234. Juafardih, 235. Jurkan, 236. Kachanama, 237. Kahina, 238. Kahiñar, 239. Kaitha, 240. Kakarahta, 241. Kakeria, 242. Kakrahta, 243. Kakrauni, 244. Kala Bhavan, 245. Kalani Kalan II, 246. Kalayat, 247. Kalli Najhagaman Pachchim, 248. Kalli Pachchhim, 249. Kalyanpura, 250. Kampil, 251. Kanauj, 252. Kandarana, 253. Kanhauli Dhanraj, 254. Kaniapur, 255. Kankarbagh, 256. Kannauj, 257. Kannauj, 258. Karahna, 259. Karchalipur, 260. Kardhan, 261. Karha, 262. Karihan, 263. Karmanasa, 264. Kashipur, 265. Kaspon, 266. Kasrawadh, 267. Katragarh, 268. Kaundanpur, 269. Kaurara Buzurg, 270. Kausambi, 271. Kayatha, 272. Keur, 273. Khadda, 274. Khaga, 275. Khalaua, 276. Khanwa Khera, 277. Kharahwan, 278. Kharwal, 279. Kheora, 280. Khera, 281. Kheradih, 282. Khokhrakot, 283. Kilarman, 284. Kodar, 285. Kodumanal, 286. Koiran, 287. Kopia, 288. Koppal, 289. Kot, 290. Kota ki Mari, 291. Kotabarahi, 292. Kotasur, 293. Kotia, 294. Kotra, 295. Kua Khera, 296. Kukra, 297. Kumrahar, 298. Kuri Diha, 299. Kushuridih, 300. Kutwar, 301. Lachchhagiri, 302. Lachhagir, 303. Lahar, 304. Lahuradeva, 305. Lakhmapur, 306. Lakshman-Tila, 307. Lalpur, 308. Lalpura, 309. Latifshah Dam, 310. Leelapur, 311. Madanpur, 312. Madaraha, 313. Madarpur, 314. Madavdih, 315. Madya, 316. Magaraur, 317. Mahada ka kot, 318. Mahagaon, 319. Mahamadagarh, 320. Maheshwar, 321. Mahewa, 322. Mahinagar, 323. Mahjidia I, 324. Mahjidia II, 325. Mahjidia III, 326. Mahnydih, 327. Mahuapur Chauthar, 328. Majanpur, 329. Malhar, 330. Maligaimedu, 331. Mandai, 332. Mandoni, 333. Mangalkot, 334. Manjhi, 335. Manjhihar, 336. Manpur, 337. Manwan, 338. Maoraon, 339. Marchayadih, 340. Masaon, 341. Masaondih, 342. Mastipur-tikya, 343. Masumpur, 344. Mathura, 345. Mati Kisanpur, 346. Mau Radhan Rasdhan, 347. Mau-Buzurg, 348. Mehara-Buzurg, 349. Mia, 350. Mirzapur, 351. Misa, 352. Moradhawaj, 353. Mow, 354. Muiyagarh, 355. Munj, 356. Nadini Dihi, 357. Nadner, 358. Nagal, 359. Nagar, 360. Nagara, 361. Nagiari, 362. Nagragarh, 363. Nala Sopara, 364. Nandaur, 365. Nander, 366. Nandur, 367. Narayangad, 368. Narhan, 369. Narpat Singh Ki Garhi, 370. Nasik, 371. Navda Toli, 372. Nawabganj, 373. Nazipur, 374. Nazirabad, 375. Nevari, 376. Newal, 377. Nibi, 378. Noh, 379. Nokhera, 380. Oraghar, 381. Orarheen ka kot, 382. Ozham, 383. Pachaura, 384. Pagia, 385. Paharia, 386. Painra, 387. Pakara Buzurg, 388. Pakari Dubey, 389. Pakhanna, 390. Palkhera, 391. Panhan, 392. Panipat, 393. Panr, 394. Parham, 395. Pariar, 396. Parraon, 397. Parwar, 398. Pataliputra, 399. Patan, 400. Patna, 401. Paun, 402. Pengawa, 403. Person, 404. Pharengi, 405. Pipargaon, 406. Pipari, 407. Piprahwa, 408. Pirthnagar, 409. Poiyi, 410. Prahaladpur, 411. Prakash, 412. Puraini, 413. Purana Qila, 414. Pure Buzurg, 415. Putli Karar, 416. Qila Muhammadnagar, 417. Rahiniyapur, 418. Raigram, 419. Raipur Bilasrual, 420. Raja Karna ka Qila, 421. Raja ki Ankori, 422. Raja Nala ka Tila, 423. Rajagriha, 424. Rajapur, 425. Rajbadi Danga, 426. Rajgarh, 427. Rajghat, 428. Rajgir, 429. Rajmahal, 430. Rajmahal, 431. Ramdiha, 432. Ramnagar, 433. Ranipur, 434. Ranjhat, 435. Reona, 436. Rohini, 437. Rohniya ka kot, 438. Ropar, 439. Rugar, 440. Sahadauli, 441. Saini, 442. Sakas, 443. Salempur Perhina, 444. Sanchankot, 445. Sanchi, 446. Sandipani, 447. Sanghoi, 448. Sankha, 449. Sankhara, 450. Sankhim Buzurg, 451. Sankisa, 452. Sannati, 453. Sanon, 454. Santokhpur Ghat, 455. Sarahiyadih, 456. Sarai Mohana, 457. Sarai Sheikh, 458. Sarangpur, 459. Sariya, 460. Sarnath, 461. Sarpoka Pipari, 462. Sarseena, 463. Sathar, 464. Saton, 465. Saunakdih, 466. Sauripur, 467. Sohagaura, 468. Sawalda, 469. Semthan, 470. Sevaidih, 471. Shahabad, 472. Shahad Karar, 473. Shaharidih, 474.

4. As shown in Map 1, the manufacturing of NBPW started in the middle and lower Ganga plains. With passage of time, the number of sites in this region increased (Maps 2 and 3). Moreover, trade started flourishing and the number of sites in central and southern India also started increasing in these periods.
5. By the time of Sunga-Kushana period as seen in Map 4, the use of NBPW had again limited itself to the middle Ganga plain. Perhaps it was due to the fact that production of the ware had started to disintegrate but it remained in limited circulation for some years.

Discussion

Northern black polished ware is a fascinating ware and by all means was a premium ware of its age. It catered to elite section of the society during that period. Through mapping of all reported NBPW sites, we are able to successfully narrow down the geographical location of NBPW use and manufacturing sites in different time period, as well as establish trading link between the NBPW sites in the Ganga plains with the central and southern India. These maps can be further enhanced if we can include the subtle difference within the NBPWs found and classify them further into different subtypes like that of tinges in NBPW.

This literature survey yielded 1015 NBPW sites within the present day political boundary of

India. The sites are associated with various cultural horizons and distributed throughout but concentrated density in middle Ganga plain, in respectable numbers in Madhya Pradesh, which is followed by West Bengal, and sparse in the west and south. This ware seems to have appeared late in the southern, western, and eastern part of India and beyond.

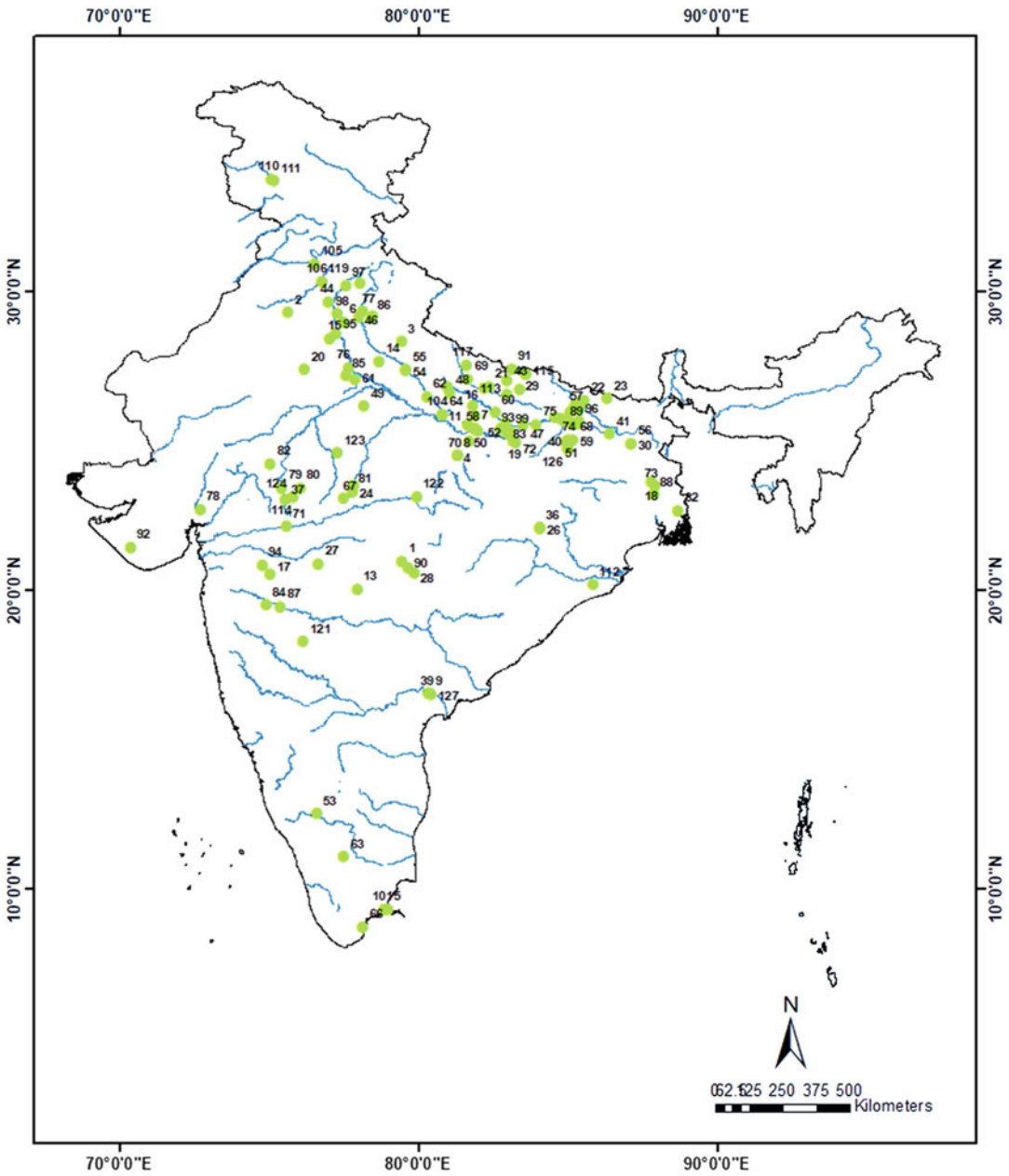
NBPW dating to earlier than 700 BCE are only found in the middle Ganga plain from 160 sites. The next phase, i.e., 700–300 BCE (known as NBPW period in Indian Archaeology) yielded NBPW from 550 sites through the length and breadth of the country. The distribution during the Mauryan time period (300 BCE to 100 CE) remained throughout, however, it was limited to 130 sites. It is interesting to note here that though during the rule of multiple kings, i.e., the period of Mahajanapadas, NBPW was in wider circulation and production, but in the following period when the subcontinent was ruled by a single Kingdom, i.e., the Mauryan, there is decline in use of this deluxe ware vis-à-vis production. Although 270 sites from Sunga-Kushana Period have reported NBPW but it is limited to the middle Ganga plain and disappeared from circulation from other areas except for few stray finds from northwest India and a few finds in east and south.

Finds of NBPW in respectable quantity in northwest, Deccan, and Eastern part of the subcontinent shows that it was not unknown to the people of this region. The evidence of NBPW in south and western India is very poor.

←

Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 2 (continued) Shahganj, 475. Shahpur, 476. Shampur, 477. Shamsheganj Maholi, 478. Sheikhopur, 479. Sherpur, 480. Shikhana mound, 481. Shimla, 482. Sidhi, 483. Sidut ka kot, 484. Sikandarpur, 485. Sikariganj, 486. Sirpat Baram, 487. Sirsa, 488. Sirsaganj, 489. Sisupalgarh, 490. Siswal, 491. Siswania, 492. Sitalpur, 493. Siyapur, 494. Siyara Jhunri, 495. Sohagaura, 496. Sonapat, 497. Sonapur, 498. Sonik, 499. Sonitpur, 500. Sonpur, 501. Sooran, 502. Soron, 503. Sravasti, 504. Sringaverapura, 505. Sringraur, 506. Subhanath, 507.

Sugh, 508. Sunari, 509. Takhawan, 510. Tamluk, 511. Taradih, 512. Tendus, 513. Ter, 514. Tewar, 515. Thana, 516. Theriruvveli, 517. Thurat, 518. Tickar, 519. Tikri, 520. Tildhar, 521. Tilpat, 522. Tohargani, 523. Tokwa, 524. Trilokapur, 525. Tripuri, 526. Tumain, 527. Tungi, 528. Uchad, 529. Udhaura, 530. Udsara, 531. Ujaini, 532. Ujhan, 533. Ujjain, 534. Ukada, 535. Umargarh, 536. Umed Khera, 537. Unch Dih, 538. Uncha Islamabad, 539. Unnao, 540. Uruva, 541. Utrawan, 542. Uttara, 543. Vaddamanu, 544. Vaisali, 545. Vaman, 546. Varaha, 547. Veekar, 548. Virpur, 549. Wazidpur ka kot, 550. Zafarabad



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 3 Distribution of NBPW, 300 BCE to 100 CE. 1. Adam, 2. Agorha, 3. Ahichchhatra, 4. Ajargha, 5. Alagankulam, 6. Alamgirpur, 7. Allahpur, 8. Amar Kachh, 9. Amaravati, 10. Amil Koni, 11. Amini, 12. Anai, 13. Arni, 14. Atranjikheda, 15. Autha, 16. Ayodhya, 17. Bahal, 18. Bahiri, 19. Baira Dumuhwa, 20. Bairat, 21. Baksari banni, 22. Baligarh, 23. Balirajgarh, 24. Besnagar, 25. Bharat Mandir, 26. Bhavanipur, 27. Bhon, 28. Brahmapuri, 29. Chaisar, 30. Champa, 31. Chandahadih, 32. Chandraketurgarh, 33. Chechar, 34. Chhapra, 35. Chirand, 36. Dadhari, 37. Dangwada, 38. Daulatabad, 39.

- Dharanikota, 40. Dharaut, 41. Dharhara, 42. Durvasa, 43. Ganwaria, 44. Ghurum, 45. Gobindpur, 46. Hastinapur, 47. Hetimpur, 48. Hulaskhera, 49. Jaderau, 50. Jhusi, 51. Kachanama, 52. Kala Bhavan, 53. Kanaganahalli, 54. Kanauj, 55. Kannauj, 56. Karna Ka Tila, 57. Katragarh, 58. Kausambi, 59. Keur, 60. Khairadih, 61. Khalaua, 62. Kheora, 63. Kodumanal, 64. Kolakhas, 65. Kolhua, 66. Korkai, 67. Kotra, 68. Kumrahar, 69. Kuri Diha, 70. Madighat, 71. Maheshwar, 72. Malhar, 73. Mangalkot, 74. Manjhi, 75. Masaon, 76. Mathura, 77. Moradhwaj, 78. Nagara, 79. Nagda, 80. Nander, 81. Nandur, 82. Narayangad, 83. Narhan, 84. Nevasa, 85. Noh, 86. Noorpur, 87. Paithan, 88. Pandu Rajar Dhibi, 89.

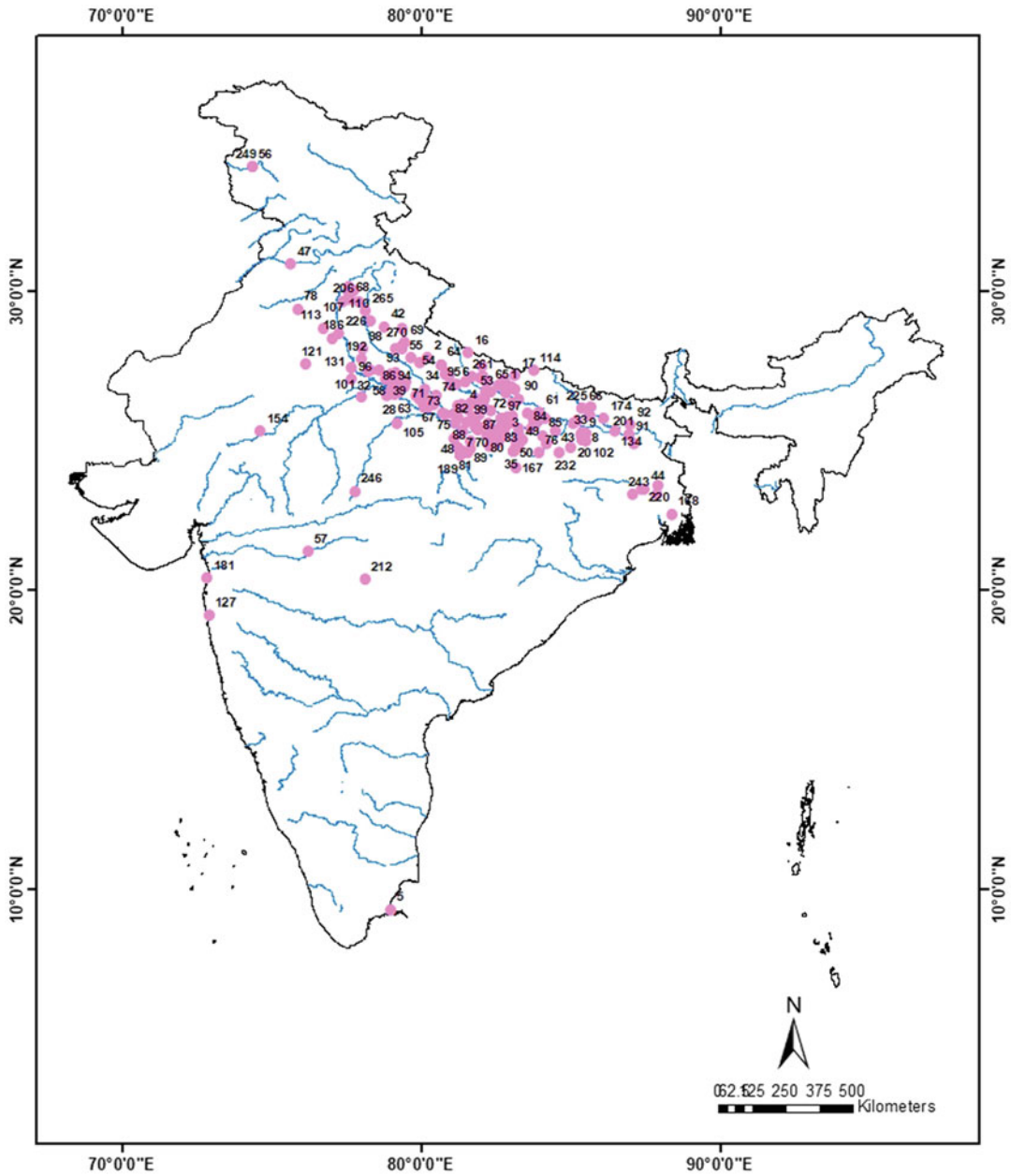
The earliest evidence of NBPW in India is reported from Juafardif dated to *c.* 1200 BCE. NBPW covers the period of the Mahajanapadas, the Nandas, the Mauryas, the Sungas, and the Kanvas. Distribution pattern and the chronology of the NBPW clearly demonstrate that NBPW was in use right from the formation of the Janapadas and it was during this time that the production technologies of the NBPW got standardized. The very tinges and variety of the NBPW found during this period bear an eloquent testimony to the fact that the making of variety of NBPW had been fully understood and utilized to the maximum extent by the artisan of that time. It remained in use with all its variety (rather with addition of few more tinges) throughout Mauryan period.

In general the catchment area of luxury items is always broad. Was it that middle Ganga plain people were affluent class then the rest or there were any other factors responsible for limited distribution of this ware beyond a geographical

region, prior to fifth century BCE? Ahmed (2015) is of the view that during the extension of boundaries by Janapadas which led to establishment of 16 Mahajanapadas around sixth to fifth century BCE, people right from Rajgir in the north-west and up to Ujjain in the south would have become quite familiar with NBPW and to cope with their changing socioeconomic and political status they started using the best ware of the time, i.e., NBPW. In Mauryan time period, the use catchment area extended to large part of north and east India but neither the production catchment extended beyond the middle Ganga plain nor the use extended to entire Mauryan Empire. The diffusion of NBPW to the Southern and eastern part of the subcontinent might be related to the spreading of Buddhism as it was propagated during the Mauryan rule of Ashoka. Mauryan period was followed by the Sungas, Kushanas, and Guptas in the core NBPW region. All the three empires were known for their wealth, prosperity, and art

←
Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 3 (continued) Pataliputra, 90. Pauni, 91. Piprahwa, 92. Prabhas Patan, 93. Prahaladpur, 94. Prakash, 95. Purana Qila, 96. Raghua-soi, 97. Raipur, 98. Raja Nalaka Tila, 99. Rajghat, 100. Rajgir, 101. Ramanathapuram, 102. Ramnagar, 103. Ranjhat, 104. Reh, 105. Ropar, 106.

Rupar, 107. Sarai Mohana, 108. Sarnath, 109. Sohagaura, 110. Semthan, 111. Si Mithan, 112. Sisupalgarh, 113. Siswania, 114. Sodanga, 115. Sohagaura, 116. Sonpur, 117. Sravasti, 118. Sringaverapura, 119. Sugh, 120. Takiaper, 121. Ter, 122. Tripuri, 123. Tumain, 124. Ujjain, 125. Ujjaini, 126. Uttara, 127. Vaddamanu, 128. Vaisali, 129. Vidisha, 130. Virpur



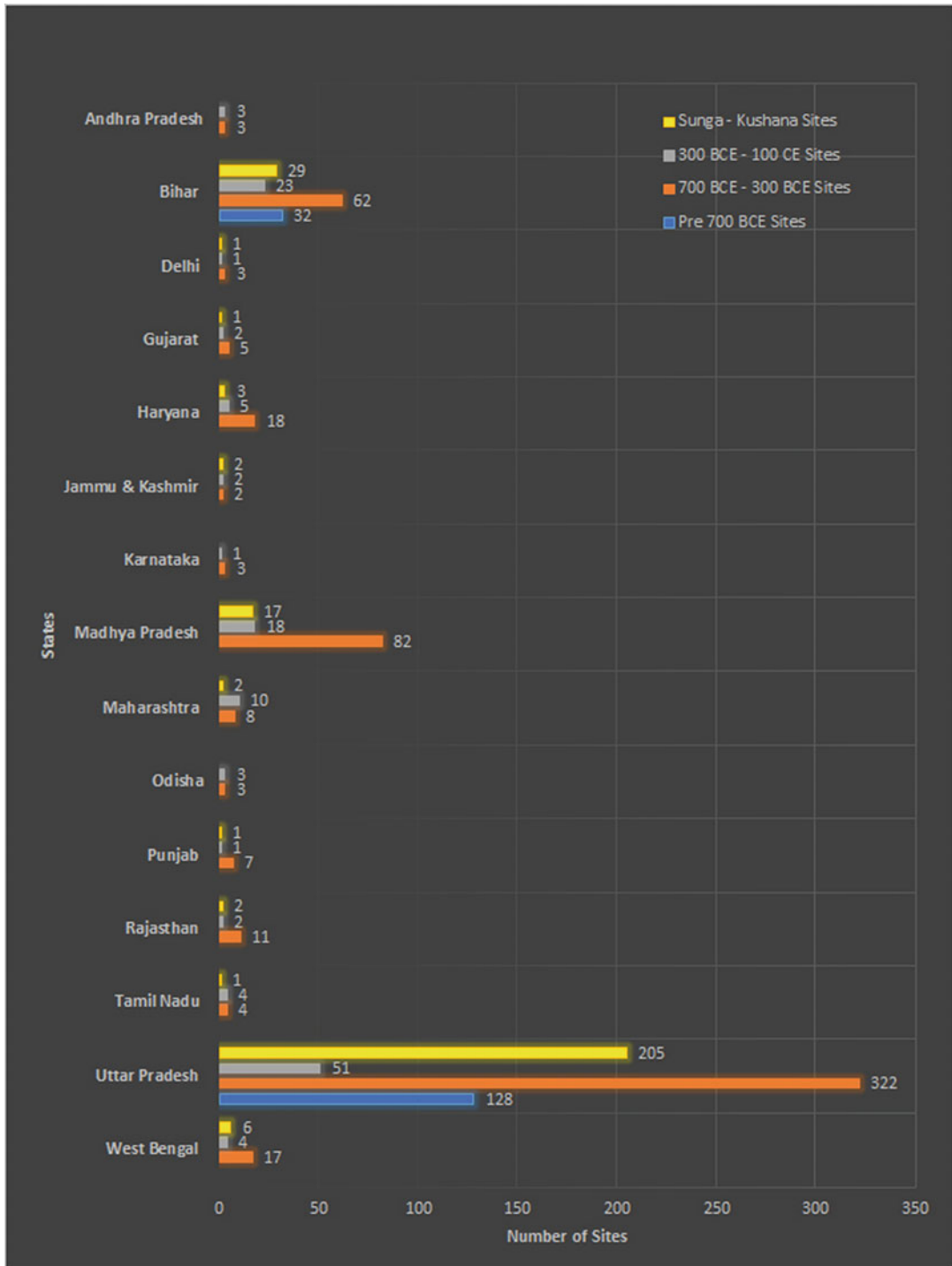
Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 4 Distribution of NBPW, Sunga Kushana Period. 1. Abbasganj, 2. Abhaipur, 3. Ahi, 4. Aiaspur Dih, 5. Alagankulam, 6. Alapur Deehan, 7. Anjora I, 8. Ankhurigarh, 9. Arawan, 10. Arje, 11. Aronj, 12. Arsara, 13. Asai, 14. Asawar, 15. Awainia, 16. Babaganj, 17. Baghi, 18. Baharia, 19. Bahuti Mai Chakchaurna, 20. Baidrabad, 21. Bajahan, 22. Bajtha, 23. Bakarganj, 24. Banawarighat, 25. Banbhikhanpur, 26. Baniya, 27. Banni, 28. Barakalan, 29. Baraulia, 30. Baraun, 31. Barauna Khurd, 32. Barhan, 33. Barhauna, 34. Bari, 35. Barkard, 36. Barrainchi, 37. Basahava, 38. Bedaur, 39.

- Behsi, 40. Bhagner, 41. Bhagwas, 42. Bhaintari, 43. Bhairodih, 44. Bharatpur, 45. Bharthara, 46. Bhatgawan, 47. Bhatta Dhua, 48. Bhirawa, 49. Bhorsar, 50. Bichchi, 51. Bidaon, 52. Bihupur, 53. Bikapur, 54. Bitoria Riuri, 55. Brahmapur, 56. Bunagantmula, 57. Burhanpur, 58. Burru Phapkund, 59. Chachinda, 60. Chaderu Chaukatha, 61. Chainyya Dihwa, 62. Chaisare, 63. Chakarnagar, 64. Chakra Tirtha, 65. Chamarahvaghata, 66. Chamudagarh, 67. Chandanpur, 68. Chandiana Koli, 69. Chanheta, 70. Channapur Dih, 71. Chanwar, 72. Chauki, 73. Chhedani, 74. Chilraula, 75. Chitrakota, 76. Churmuliadih, 77. Dalippur, 78. Daulatpur, 79. Derwa Khurd, 80. Dharampur, 81. Dhari, 82. Diha, 83. Dihwan, 84.

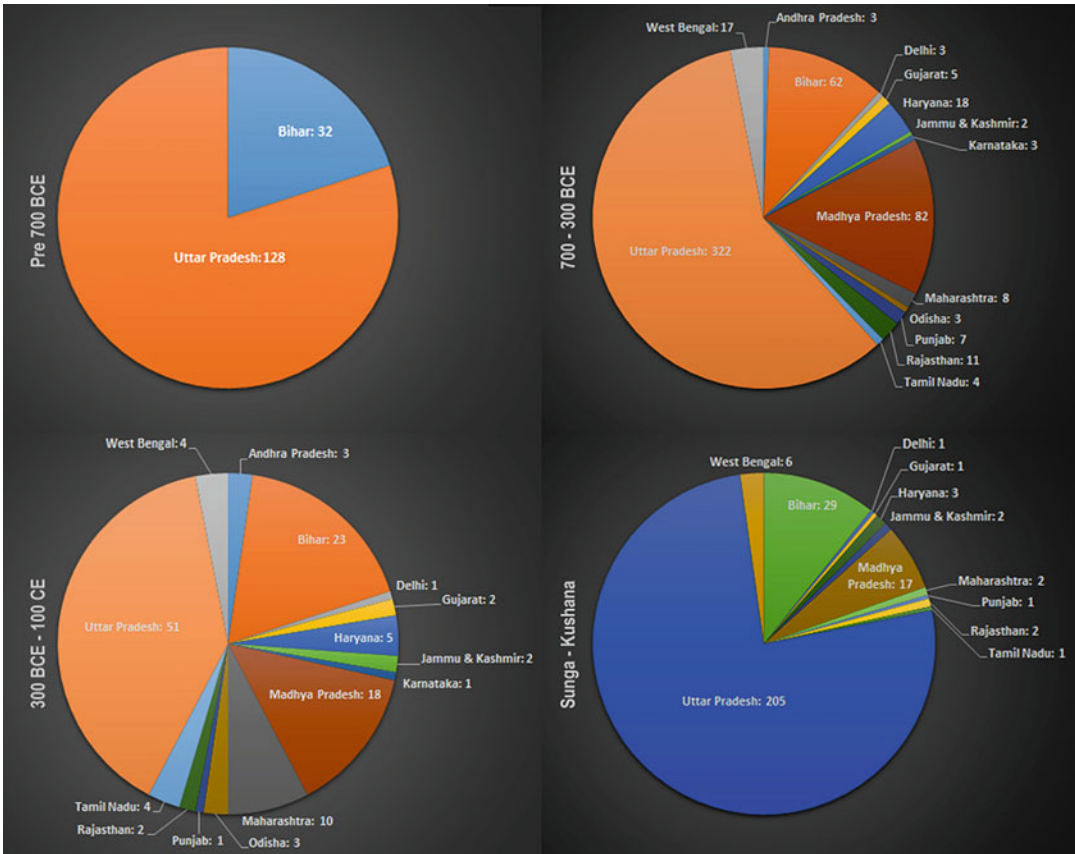
←

Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Map 4 (continued)

Dildamagar, 85. Dilla, 86. Dobah, 87. Draupadi ghat, 88. Dubaha, 89. Dubgawan, 90. Dugra, 91. Durga Asthan, 92. Durgapur, 93. Eka, 94. Etawah Fort, 95. Faridinagar, 96. Fatehpur Sikri, 97. Gaddi K Tan, 98. Gaonri, 99. Garha, 100. Garha Gopalpur, 101. Gilaulikhera, 102. Giriyaak, 103. Gothua, 104. Gularihavaghat, 105. Gursara Shukul, 106. Hajipur, 107. Hakimpur Tahra, 108. Haradevanath, 109. Hetapatti Sirohi, 110. Hulas, 111. Husainganj, 112. Indrani, 113. Ismaila 1, 114. Itahia Tewari Purwa, 115. Itha, 116. Itoura, 117. Jalalpur, 118. Jamen, 119. Jaula, 120. Jhangirbad, 121. Jodhpura, 122. Jogiya 1, 123. Joorapatti, 124. Jorasi, 125. Jurapatti, 126. Kachnaon, 127. Kanheri, 128. Karama, 129. Karangarh, 130. Kasraon, 131. Katra Keshavdeo Mound, 132. Katragarh, 133. Kewai dih, 134. Khakharadih, 135. Khariad, 136. Khata, 137. Khumehri, 138. Kishni, 139. Kisraom, 140. Kithbariya, 141. Kochhit, 142. Kohra, 143. Koiripur, 144. Konhara Ghat, 145. Kota, 146. Koteshar Mahadev, 147. Kothia, 148. Kudarkot, 149. Kunwaridih, 150. Kurmipur, 151. Kurwar, 152. Kushmri, 153. Kusi, 154. Lachchura, 155. Lakhneswar Dih, 156. Lalmanpur, 157. Lathaura, 158. Latifshaj, 159. Lodipur, 160. Lodipur, 161. Madhuri, 162. Maghar, 163. Mahadeo Raja ka Kila, 164. Mahadev Mishra, 165. Mahanaiya Dih, 166. Mahet, 167. Mahuarua, 168. Malikpura, 169. Malpar II, 170. Mamen, 171. Mandiaon, 172. Mandowala, 173. Maner, 174. Mangalgarh, 175. Manjhoi, 176. Mankahari, 177. Manoalkot, 178. Marai, 179. Matethu, 180. Mehrabad, 181. Mehtawari, 182. Miar, 183. Milk Husainpur Kalan, 184. Moharawa I, 185. Moharawa II, 186. Muhammadnagar, 187. Mundiari, 188. Mura Diha, 189. Muriari, 190. Nadiyanasa, 191. Nagaria, 192. Nagla Dayal, 193. Nagla Havelia, 194. Nagla Khas Gloura, 195. Nagla Khera, 196. Nai Dih, 197. Nai Dih, 198. Naipora, 199. Nandini, 200. Nariha, 201. Nathnagar Thana, 202. Naugarh, 203. Nibhapur Piprahi, 204. Nindaur, 205. Nirola, 206. Nurnagar, 207. Nurpur, 208. Pachawania, 209. Pachpokhari, 210. Padri Lalpur, 211. Pali, 212. Pancha Pandava Tekdi, 213. Pandurghat, 214. Parewa Jal, 215. Pasahi, 216. Phaphamau, 217. Pilich, 218. Piparpatia, 219. Pithan, 220. Pokharna, 221. Prabhunarainpur, 222. Praonkh, 223. Pratappur, 224. Pundri, 225. Pura Balian, 226. Purana Qila, 227. Puranikot, 228. Radhan, 229. Raki, 230. Ramanagar, 231. Raump, 232. Raungarh, 233. Rihiniyapur, 234. Rudhauli, 235. Rurukalan, 236. Sabaidlh, 237. Sabhad, 238. Sahan, 239. Salaraha, 240. Samain, 241. Sandiram, 242. Sanwaradih, 243. Saragadhi, 244. Sarai, 245. Saroli Dih, 246. Satdhara, 247. Sathin, 248. Shahbad, 249. Sheri Mulsama, 250. Sherpur Qutbpur, 251. Sihpur, 252. Sisaur Andupur, 253. Sultanpur Ghaos, 254. Surikh, 255. Susipar, 256. Tahsil Ghatampur, 257. Taripachisa, 258. Tenuhar, 259. Tharauli, 260. Thuthia Khurd, 261. Tikauli, 262. Udaipur, 263. Ujardlh, 264. Umara, 265. Umarpatti, 266. Ummedpur, 267. Unai, 268. Upadhi, 269. Wina, 270. Zimi Chak



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Fig. 4 Distribution of NBPW yielding sites in Indian states



Northern Black Polished Ware in Indian Archaeology: A Study of Spatial and Chronological Distribution, Fig. 5 State and period -wise distribution of NBPW

but discontinuation of this “luxury ware” in their time is a subject of further research.

While the NBPW, once produced, “travelled” to distant places, their production required a complex web of processes, techniques, and skills that were likely to be available at only a limited number of locations. Thus, the dispersal was of the artefact, not of the whole web of production processes.

References

- Agrawal, D.P. 2009. Mystery of the gloss on the early historic NBP ware. In *History of Indian science and technology*, ed. R. Malhotra and J. Patel. <http://www.indianscience.org/essays/NBP%20Gloss.pdf>
- Ahmed, J. 2015. *Technology and culture change (northern black polished ware culture in the middle Ganga plain)*. Indore: International E- Publication.
- Archaeological Survey of India Report on Ayodhya. (2003). Ayodhya 2002–2003, Volume I, Chapter X.
- Haque, E., S.S.M. Rahman, and S.M.K. Ahsan. 2001. A preliminary report on Wari-Bateshwar trial excavation by ICSBA. *Journal of Bengal Art* 5: 11–40.
- Kanungo, A.K. 2013. *Glass in Ancient India: Excavations at Kopia*. Thiruvananthapuram: Kerala Council for Historical Research.
- Lal, B.B. 1954–55. Excavations at Hastinapura and other Explorations in the Upper Ganga and Sutlej Basins 1950–52: New light on the dark age between the end of the Harappa culture and the early historical period. *Ancient India* 10–11: 5–156.
- Lal, B.B. 1975. In search of India’s traditional past: lights from the excavations at Hastinapura and Ayodhya. *India International Centre Quarterly* 2 (4): 311–314.
- Marshall, J. 1908. Excavations at Sarnath. Archaeological Survey of India Annual Reports 1907–08.
- Marshall, J.H. 1911. Excavation at Saheth-maheth. Annual report of Archaeological survey of India 1910–11.
- Marshall, J. 1951. *Taxila*, 3 Vols. Cambridge: Cambridge University Press.

- Marshall, J. 1910. Excavation at Bhita. Annual report of Archaeological survey of India 1909–1910.
- Nigam, J.S. 1961. Northern black polished ware. *Marg* 14 (3): 37–46.
- Rahman, S.S.M. 1998. Recent discovery of northern black polished ware in Mahasthangarh region: An archaeological perspective. *Journal of Bengal Art* 3: 75–93.
- Rowson, P.S. 1953. Surface treatment of early Indian pottery. *Man* 14: 41–42.
- Roy, T.N. 1978–79. A suggested classification of northern black polished ware. *Puratattva* 10: 106–109.
- Roy, T.N. 1983. *The Ganges civilization*. New Delhi: Ramanand Vidya Bhawan.
- Roy, T.N. 1986. *A study of northern black polished culture: An Iron Age culture of India*. New Delhi: Ramanand Vidya Bhawan.
- Sahay, S. 1969. Origin and spread of northern black polished ware. In *Potteries in ancient India*, ed. B.P. Sinha, 146–154. Patna: Dept. of Ancient Indian History & Archaeology, Patna University.
- Saran, S.C., N.G. Nikoshey, S. Nayan, J.K. Tiwari, A. Arif, and N. Saxena. 2008. Excavation at Juafardih and its identification with Kulika. *Puratattva* 38: 59–73.
- Sharma, G.R. 1960. *The excavations at Kausambi (1957–59) – The defences and the Syenaciti of the Purusamedha*. Allahabad: Department of AHC and Archaeology, University of Allahabad.
- Sinha, B.P. 1979. *Archaeology and art of India*. New Delhi: Sundeep Prakashan.
- Sinha, B.P. 1997. Ancient Magadh: The cradle of the northern black polished ware. In *Ancient ceramics*, ed. P.C. Pant and Vidula Jaiswal, 85–108. New Delhi.
- Sinha, P. 2001. Buddhist sites of the Age of Buddha: Archaeological evidence on dating and urbanization. In *Life thought and culture in India (from c. 600 BC to c. AD 300)*, Vol. I Part-2, ed. G.C. Pande. Publication in History of Indian Science, Philosophy and Culture Series (General Editor: D. P. Chattopadhyaya). New Delhi: Pauls Press.
- Deva, Krishna, and R.E.M. Wheeler. 1946. Northern polished black ware. *Ancient India* 1: 55–58.
- Dikshit, K.N. 1977–78. Did the painted grey ware continue up to the mauryan times. *Puratattva* 9: 64–83.
- Dikshit, K.N. 2002–03. Ramayana, Mahabharata and archaeology. *Puratattva* 33: 114–118.
- Erdosy, G. 1985. Settlement archaeology of Kausambi region. *Man and Environment* 9: 66–75.
- Ghosh, A. 1951. Rajgir 1950. *Ancient India* 7: 66–78.
- Gogte, V.D. 1997. The Chandraketurgarh-Tamluk region of West Bengal: Sources of the early historic rouletted ware from India and Southeast Asia. *Man and Environment* 22: 69–85.
- Joshi, M.C., and A.K. Sinha. 1978–79. A chronology of Mathura—an assessment. *Puratattva* 10: 39–44.
- Lal, B.B. 1985. Mathura: A re-assessment of the chronology of the crucial northern black polished ware horizons. *Man and Environment* 9: 109–112.
- Mate, M. 1969–70. Early historic fortifications in Ganga valley. *Puratattva* 3: 58–69.
- Nauriyal, K.C. 1990–91. The northern black polished and other associated wares from Ropar. *Puratattva* 21: 87–89.
- Possehl, G.L. 1988. Radiocarbon dates from South Asia. *Man and Environment* 12: 169–196.
- Rai, S., and T.N. Roy. 1980–81. Mossbauer studies of black slipped and northern black polished wares. *Puratattva* 12: 165–167.
- Sahi, M.D.N. 1974. Stratigraphical position of the N.B.-P. Ware in the upper Ganga Basin and its date. *Puratattva* 7: 91–94.
- Sarma, L.K. 1990–91. Ceramics and maritime routes of India: New evidence. *Puratattva* 21: 37–42.
- Sharma, Y.D. 1953. Exploration of historical sites. *Ancient India* 9: 116–169.
- Sharmin, Dilruba, and Fumio Okada. 2011. Surface coating technique of northern black polished ware by the microscopic analysis. *Ancient Asia* 3: 49–65.
- Sinha, A.K. 1982. The chronological grouping of the painted grey ware sites. *Man and Environment* 6: 102–106.
- Sinha, B.P. 1969. *Potteries in ancient India*. Patna: Patna University.
- Sinha, B.P. 1995. Ancient cities of Bihar in archaeology and literature. *Man and Environment* 20: 7–20.
- Wasson, R.J. 1987. Report of Indo-French archaeological mission: Summary of 1985 field season. *Man and Environment* 11: 123–125.

Further Readings

- Agrawal, D.P., and S. Kusumgar. 1979. Radiocarbon chronology of Indian protohistoric cultures. In *Essays in Indian protohistory*, ed. D.P. Agrawal and D.K. Chakravarti, 371–386. New Delhi: D.K. Publishers.
- Chakrabarti, D.K. 1984–85. Iron and urbanization: An examination of the Indian context. *Puratattva* 15: 68–74.