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# Contributions of *Padmashree V. S. Wakankar* in the Study of Chalcolithic Cultures of Central India

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**Abstract:** *V. S. Wakankar is a well-known personality in Indian archaeology. His contributions in the rock art studies have been well documented by many scholars. In regard to his contributions in Chalcolithic studies, his research mainly in Central India has not only established the cultural chronology of the region but brought to light the first farming culture of Central India in the form of Kayatha culture. He synthesized the archaeological data with Purnaic traditions and tried to establish a connection between both.*

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**Keywords:** Puranic Traditions, Excavations, Explorations, Graffiti, Aryan, Sindhu-Saraswati, Vedic Period

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## Introduction

A very apt description of Dr. Wakankar was made by Sankalia when he defined him as 'a very enthusiastic and intelligent student from Ujjain' (Sankalia 1958:3). Wakankar through his dedication and commitment towards the field of archaeology proved this description to be very appropriate.

V.S. Wakankar did his G.D. Art from J.J. Schools of Art, Mumbai, M.A. from Vikram University, Madhya Pradesh and his Ph.D. in 1973 on the topic Painted Rock Shelters of India from Deccan College, Pune. His education itself is the combination of various archaeological branches. His orientation towards art must have helped him in Rock art studies; his M.A. and Ph.D. in archaeology served the basis for his archaeological work which he carried out in Central India.

V.S. Wakankar made it a point to make Central India his area of domain and it has been majorly because of his work that Central India holds an important position in the archaeological world map. He dedicated his life to work in a specific region which not only brought to light the rich archaeological heritage of the area but is still a guiding force for new research and understanding. A major breakthrough of his life was the discovery of Bhimbetka rock shelters in 1957. From 1957 onwards V.S. Wakankar

became a famous personality of Indian archaeology and then there was no looking back for him. He carried out explorations in various parts of Madhya Pradesh and brought to light number of sites ranging from Paleolithic to Medieval period.

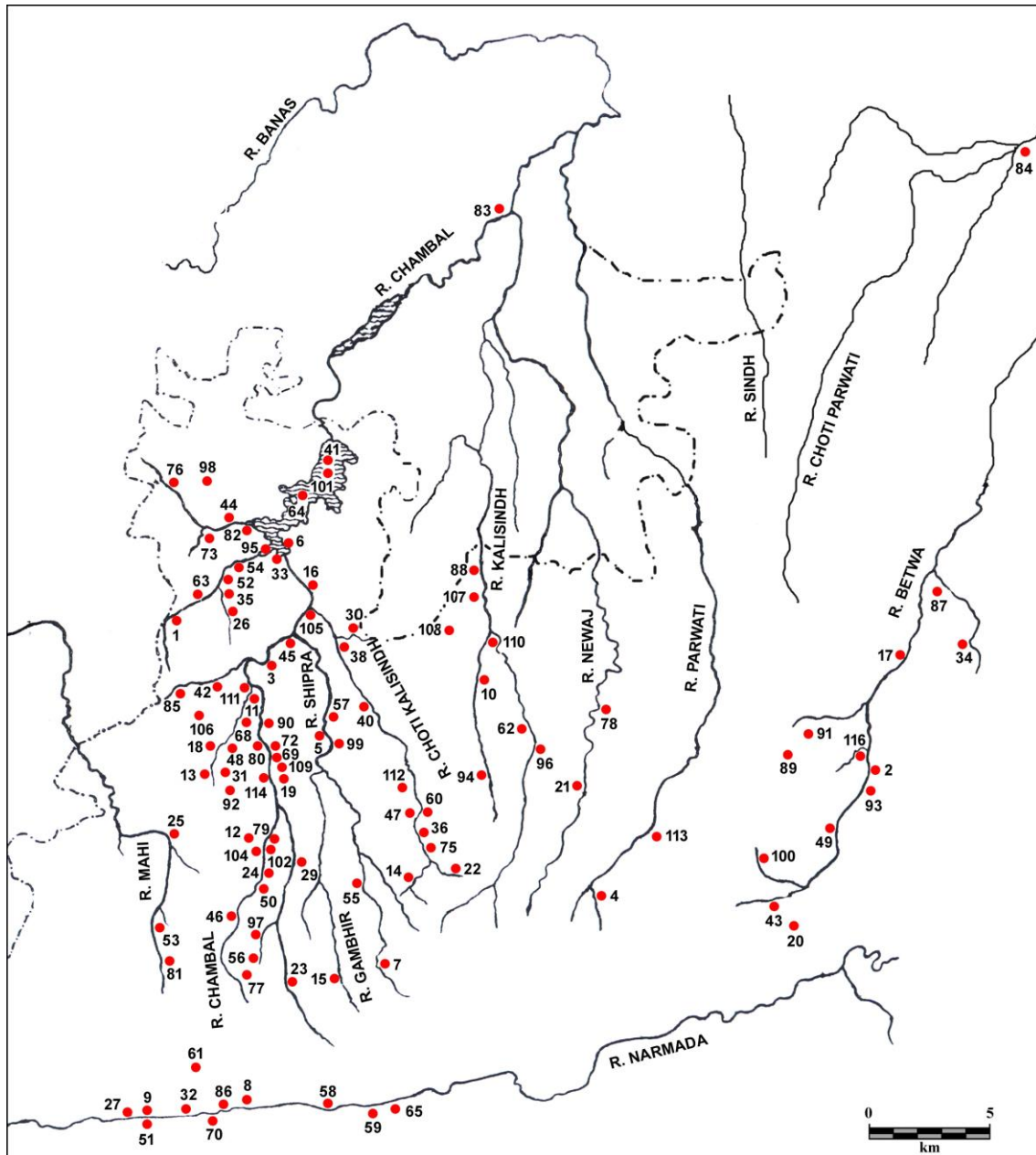


Figure 1: Sites Discovered by V. S. Wakankar (Adapted Wakankar 1967, 1976)

His contributions in the field of Rock art studies are well known. His contributions in the field of prehistory, protohistory, Harappan civilization, Early Historic, Epigraphy, Art and Architecture and Numismatics are par excellence. He was a true versatile archaeologist having knowledge of all the disciplines of archaeology which is a rare phenomenon in modern times. In this paper I will be focusing on his work related to Chalcolithic phase in Central India. I have divided this paper in three parts:

1. Explorations and Sites discovered by V.S. Wakankar particularly of Chalcolithic period
2. Sites of Chalcolithic period excavated by him
3. His contributions in the Chalcolithic studies

## Explorations

Prof. V.S. Wakankar of Vikram University, Ujjain, Madhya Pradesh has contributed immensely in Indian archaeology. Various surveys were carried out by him individually as well as in collaborations with various archaeological departments such as State Archaeology of Madhya Pradesh, Sagar University, Deccan College etc. These collaborations show that he was interested in multi disciplinary studies and worked as a team member. Following are the sites which he discovered in Madhya Pradesh (Figure 1, Table 1). The number of sites may possibly be more as I may have missed some of his publications. At the same time due to absence of details some sites have not been plotted on the map and some are without details of cultural affiliations and river system. The map has been recreated using earlier maps by Wakankar (1967, 1976). Due to these explorations the regional chronology of Central India starting with Kayatha, followed by Ahar and then by Malwa is well established.

Table 1: List of Sites Discovered by V. S. Wakankar

Sl. No.	Site Name	Cultural Periods	River	Reference
1.	Achera	Chalcolithic	Shivana	Wakankar 1976
2.	Amakheda	Chalcolithic	Betwa	Wakankar 1976
3.	Asaota		Chambal	Wakankar 1976
4.	Ashta	Malwa N.B.P.	Parvati	Wakankar 1967, 1976
5.	Asloda	Malwa N.B.P.	Shipra	Wakankar 1967
6.	Avra	Malwa Ahar	Upper Chambal	Wakankar 1967, 1976
7.	Azad Nagar	Kayatha Malwa Early Historic	Shipra	Wakankar 1976, 1981
8.	Bada Badada	Malwa N.B.P.	Narmada	Wakankar 1967
9.	Badada	Malwa	Narmada	Wakankar 1967, 1976
10.	Badagaon	Kayatha Ahar Malwa	Kali Sindh	IAR 1969-70:16-17; Wakankar 1976
11.	Badawada	Malwa-Jorwe N.B.P.	Meleni	Wakankar 1967, 1976
12.	Balida		Chambal	Wakankar 1976

13.	Baloda			Wakankar 1976	
14.	Bangar	Chalcolithic	Choti Kalisindh	Wakankar 1976	
15.	Banyakhedhi	Malwa	Gambhir	Wakankar 1967, 1976	
16.	Basai	Malwa	Upper Chambal	Wakankar 1967, 1976	
17.	Basoda	Chalcolithic	Betwa	Wakankar 1976	
18.	Bhenroda	Malwa		Wakankar 1967	
19.	Bhilsudi	Malwa	Lower Chambal	Wakankar 1967, 1976	
20.	Bhimbetka	Malwa	Betwa	IAR 1966-67:66; Wakankar 1967	
21.	Biaora	Chalcolithic	Nevaj	Wakankar 1976	
22.	Bilawali	Chalcolithic	Choti Kali Sindh	Wakankar 1976	
23.	Billoda			Wakankar 1976	
24.	Birgoda		Chambal	Wakankar 1976	
25.	Borda		Mahi	Wakankar 1976	
26.	Chayan	Chalcolithic	Shivana	Wakankar 1976	
27.	Chikhalda	Malwa-Jorwe	Narmada	Wakankar 1967, 1976	
28.	Dhanasuta	Kayatha		IAR 1967-68:66	
29.	Dhangwada	Kayatha	Lower Chambal	IAR 1966-67: 67, IAR 1967-68:66, IAR 1969-70:16-17; Wakankar 1967, 1976	
30.	Dhodhar	Chalcolithic	Upper Chambal	Wakankar 1976	
31.	Digthan	Ahar Malwa N.B.P.	Lower Chambal	Wakankar 1967, 1976	
32.	Ekkalwara	Malwa-Jorwe N.B.P.	Narmada	Wakankar 1967	
33.	Elchi		Shipra	Wakankar 1976	
34.	Eran	Malwa N.B.P.	Betwa	Wakankar 1967, 1976	
35.	Fatehagarh	Chalcolithic	Shivana	Wakankar 1976	
36.	Futipal	Kayatha	Choti Kali Sindh	IAR 1966-67:67; Wakankar 1967, 1976	
37.	Gajanikheda	Chalcolithic	Meleni	Wakankar 1976	
38.	Gangadhar	Kayatha	Upper Chambal	Wakankar 1967,	

		Ahar Malwa N.B.P.		1976	
39.	Gudar	Chalcolithic		IAR 1979-80:53	
40.	Indokh	Chalcolithic	Choti Kali Sindh	Wakankar 1976	
41.	Jalod	Malwa	Upper Chambal	Wakankar 1967, 1976	
42.	Jaora	Malwa N.B.P.	Meleni	Wakankar 1967, 1976	
43.	Jaora Malkhar		Betwa	Wakankar 1976	
44.	Jharda	Kayatha Ahar Malwa N.B.P.	Retam	IAR 1969-70:16-17; Wakankar 1976	
45.	Kalukhedi	Chalcolithic	Upper Chambal	Wakankar 1967, 1976	
46.	Kanwan	Kayatha Ahar Malwa N.B.P.	Chamala	Wakankar 1967, 1976	
47.	Kayatha	Kayatha Ahar Malwa Painted Ware	Choti Kali Sindh  Grey	Wakankar 1967,1976	
48.	Khacharoda	Kayatha		IAR 1966-67: 67, IAR 1967-68:66; Wakankar 1967	
49.	Kharwai	Malwa	Betwa	IAR 1966-67: 66; Wakankar 1967,1976	
50.	Kheda- Narayana	Chalcolithic	Chambal	IAR 1979-80:53; Wakankar 1976	
51.	Khedi	Chalcolithic	Narmada	Wakankar 1967, 1976	
52.	Kolwa	Chalcolithic	Shivana	Wakankar 1976	
53.	Lalgad		Mahi	Wakankar 1976	
54.	Leelda	Chalcolithic	Shivana	Wakankar 1976	
55.	Lohagal	Kayatha Ahar Malwa	Shipra	IAR 1970-71:19; Wakankar 1976	
56.	Machakda	Malwa		Wakankar 1967, 1976	
57.	Mahatpur	Malwa N.B.P	Shipra	Wakankar 1967, 1976	

58.	Maheshwar	Kayatha Malwa-Jorwe N.B.P.	Narmada	Wakankar	1967, 1976
59.	Makadkheda	Malwa-Jorwe N.B.P.	Narmada	Wakankar	1967
60.	Maksi	Kayatha	Choti Kali Sindh	IAR	1967-68:66; Wakankar 1967, 1976
61.	Manawar	Ahar Kayatha Malwa N.B.P.		Wakankar	1967
62.	Mandoda		Khalisindh	Wakankar	1976
63.	Mandsaur	Ahar Kayatha	Shivana	Wakankar	1967, 1976; Wakankar and Bajpai 1981
64.	Manoti	Kaytha Ahar Malwa N.B.P.	Upper Chambal	Wakankar	1967, 1976
65.	Mardan	Malwa N.B.P	Narmada	Wakankar	1967
66.	Maswadia	Chalcolithic		IAR	1979-80:53
67.	Mawala	Chalcolithic		IAR	1979-80:42
68.	Meen	Kayatha	Meleni	IAR	1966-67: 67, IAR 1967-68:66; Wakankar 1967, 1976
69.	Metwas	Malwa N.B.P		Wakankar	1967
70.	Mohipura	Malwa-Jorwe N.B.P.		Wakankar	1967
71.	Morkhera	Chalcolithic		IAR	1979-80:53
72.	Nagda	Malwa N.B.P	Lower Chambal	Wakankar	1967, 1976
73.	Nahargad	Chalcolithic	Retam	Wakankar,	1976
74.	Narayangad	Kayatha Ahar Malwa		IAR	1969-70:16-17
75.	Narsali	Ahar Malwa	Choti Kali Sindh	Wakankar	1967, 1976
76.	Neemuch	Malwa N.B.P.	Retam	Wakankar	1967, 1976

77.	Nepawali	Kayatha	Chambal	IAR 1966-67:66; Wakankar 1967, 1976
78.	Pachor	Chalcolithic	Nevaj	Wakankar 1976
79.	Palwa			Wakankar 1976
80.	Parmarkhedi	Malwa	Lower Chambal	Wakankar 1967, 1976
81.	Pasawada			Wakankar 1976
82.	Paseva	Malwa N.B.P.		Wakankar 1967
83.	Patan	Chalcolithic	Chambal	Wakankar 1967
84.	Pawaya	Malwa N.B.P	Choti Parwati	Wakankar 1967
85.	Pipalda	Malwa-Jorwe N.B.P.	Meleni	Wakankar 1967, 1976
86.	Piploda	Malwa-Jorwe	Narmada	Wakankar 1967, 1976
87.	Putlikarar	Malwa	Betwa	Wakankar 1967
88.	Raipur	Chalcolithic	Kali Sindh	Wakankar 1976
89.	Raisen	Chalcolithic		Wakankar 1976
90.	Rajgad	Malwa	Lower Chambal	Wakankar 1967, 1976
91.	Rasulia			Wakankar 1976
92.	Runija	Kayatha	Meleni	IAR 1967-68:66, IAR 1979-80:53; Wakankar 1967
93.	Sachi-Nagari	Chalcolithic Painted Rock Shelter	Betwa	Wakakar 1976
94.	Samagi	Chalcolithic	Kali Sindh	Wakankar 1976
95.	Sanjeet	Ahar Malwa N.B.P.	Upper Chambal	Wakankar 1967, 1976
96.	Sarangapur	Malwa Ahar	Kali Sindh	IAR 1960-61:62; Wakankar 1976
97.	Sarwan	Chalcolithic	Retam	Wakankar 1976
98.	Sawan			Wakankar 1976
99.	Sejawata	Malwa	Shipra	Wakankar 1967
100.	Shahad Karar	Malwa	Betwa	IAR 1966-67:66; Wakankar 1967, 1976
101.	Shankhodhar	Malwa	Upper Chambal	Wakankar 1967,

	N.B.P.		1976
102. Simlawada	Malwa Ahar	Chamala	IAR 1960-61:62; Wakankar 1976
103. Simrol	Kayatha Ahar Malwa		IAR 1970-71:19
104. Singawada	Malwa N.B.P.	Chambal	Wakankar 1967, 1976
105. Sipawara	Kayatha Ahar Malwa	Gambhir	IAR 1969-70:16-17, Wakankar 1976
106. Sonagad	Ahar Malwa		Wakankar 1967
107. Soyat	Kayatha Ahar Malwa	Kali Sindh	IAR 1969-70:16-17; Wakankar 1976
108. Susner	Kayatha Ahar Malwa	Kali Sindh	IAR 1969-70:16-17; Wakankar 1976
109. Takaravada	Chalcolithic	Lower Chambal	Wakankar 1976
110. Takhala	Chalcolithic	Kali Sindh	Wakankar 1976
111. Thadawada	Malwa N.B.P.	Meleni	Wakankar 1967, 1976
112. Tilavad	Chalcolithic	Choti Kali Sindh	Wakankar 1976
113. Tingajpur	Malwa N.B.P.	Parwati	Wakankar 1967
114. Tungani	Malwa	Lower Chambal	Wakankar 1967, 1976
115. Unchakhedi	Chalcolithic		Wakankar 1967
116. Vidisha	Malwa N.B.P.	Betwa	Wakankar 1967, 1976

## Excavations

Apart from these explorations he is credited with the number of excavations. It is important to take a review of his excavations.

**Excavation at Awra:** The site is located in Mandasor District and was excavated by H. V. Trivedi, Department of Archaeology, Government of Madhya Pradesh and V. S. Wakankar. Excavations were conducted at mound Nos. 2 and 3. Out of these, Mound 3 is important for Chalcolithic period as Mound 2 is devoid of Chalcolithic Period. Two periods have been identified on the basis of ceramics. Period I is represented by Red Ware with paintings in black whereas Period II is characterized by Black Burnished Ware and Painted Black and Red Ware (IAR 1959-60:24-25).



**Excavation at Manoti:** The site is located in Mandasor District and was excavated by H. V. Trivedi, Department of Archaeology, Government of Madhya Pradesh and V. S. Wakankar. Two trenches were excavated which have given seven successive periods. The earliest Chalcolithic deposits at the site has White Painted Black and Red Ware of Ahar type, Black on Red Ware and spouted bowl of Malwa culture, Harappan type Black on Red Ware and coarse Black Ware. The site was destroyed due to flood and in next stage Chalcolithic folks erected mud brick wall to protect settlement. But even then, the site was hit by flood and Chalcolithic occupation at the site came to an end (IAR 1959-60:24-25).

**Excavations at Kayatha:** This is a major excavation which was carried by V.S. Wakankar. In his explorations particularly at the sites of Neepawali and Meen he came across a different type of Chalcolithic ceramic which he termed as Nepawali Meen Ware (Wakankar 1967). His work showed the existence of an earlier culture but it was mostly from the surface collection and not from stratified context. Against this backdrop he started his excavations at the site of Kayatha to find out the early cultures of the region. The site of Kayatha (22.78° N 78° E) is situated on the right bank of river Choti Kali Sindh which is a tributary of a river Chambal. It is approximately 25 km east of Ujjain, located on the Ujjain-Maksi road. The site is believed to have been the birth-place of the astronomer Varahamihira (IAR 1964-65:18-19; Wakankar 1967; Ansari and Dhavalikar 1971; Ansari and Dhavalikar 1975).

There are two mounds at the site of Kayatha viz. Gad Mound and Hathi Toda or Toda Mound. Wakankar excavated the site of Kayatha in 1965-67. The excavation is of great importance as far as Chalcolithic cultures of India are concerned because it brought to light the existence of a new culture in Central India termed as Kayatha Culture after the type site. Another noteworthy contribution of the excavation is that it revealed the spread of Ahar culture in Central India (Dhavalikar 1970; Ansari and Dhavalikar 1975). Before this excavation it was a general opinion that Ahar was restricted in the region of Mewar. The first excavation was carried out on both the mounds. The first excavation yielded a cultural sequence as follows (IAR 1964-65): Period I: It is represented by two stages of cultural development, which can be called as Period IA and Period IB. Period IA: This period is represented by wheel made, well fired Sturdy Ware. It has a dark-brown, mauve-purple, cream, dull red slip and had paintings on it.

Period IB: This phase is represented by the introduction of White Painted Black and Red Ware of the Ahar Culture. The dull-red ware of the earlier phase continues in limited quantities. In this phase copper and the microlithic tools have been found. The most important discovery of this phase is the introduction of terracotta bulls showing prominent hump and horns but without any head, ears or legs. Some of these were decorated with serpentine lines and crescentic marks.

Period II: This period is associated with the Black Painted Red Ware. Structural remains of house with floors made of burnt lumps of clay and lime was found. The

walls were constructed using bamboo plastered with mud. This Period includes stone-balls or hammerstones, querns, pestles and microlithic blades.

Period III: Iron was introduced in this period. N.B.P.W makes its appearance for the first time.

Period IV: Sunga period.

Period V: Gupta period

The cultural sequence was revised by Wakankar (1967) and he has given different stratigraphy for both the mounds. The cultural sequence for the Gad mound is as follows:

Period II: Painted Black and Red Ware

Period III: Painted Malwa Ware culture

Period IV: P.G.W associated with N.B.P.W culture

Period V: Sunga-Kusana period

Period VI: Gupta period

Period VII: Pre-Parmara Period

Period VIII: Parmara period

Whereas the cultural sequence for Toda Mound is as follows

Period I: Kayatha culture

Period II: Painted Black and Red Ware

Period III: Malwa culture

Period IV: British to Parmara Period

The composite stratigraphy basically shows that at Toda mound P.G.W is associated with N.B.P.W., Sunga-Kushan, Gupta and Pre Parmara levels are missing whereas at Gad Mound Kayatha culture is missing. The pottery assemblage reported by Wakankar (1967) includes 4 main wares which are as follows:

Kayatha Rough Coarse Ware

Kayatha Buff ware

Kayatha Sturdy Ware

Kayatha Incised Ware

### ***Kayatha Pottery***

*Class 1-* The pottery of this ware has been applied with a red colour slip or wash executed in such a way that it gives a feel of matt surface. In certain cases the slip or wash is applied only in certain portions of pot. The painted designs have been executed in red colour which is washable by rubbing. A mild to high carination is seen on the shoulder portion. The bases generally have elevated rings. The shapes in this class are basins, small pots and storage jars.

*Class 2-* This ware has been termed as the blotchy red ware. Both light and deep incisions are present. While the light incisions are usually seen on the neck and

shoulder, the deep incisions are sometimes present on the interior of the sherd. Some of the pots have coarse red surface in the upper half whereas lower part is smoothened. The base has been roughened by sticking sand when the pot was wet and unbaked.

*Class 3-* A red slip has been applied to this coarse ware giving it a matt finish. A ring or disc base is generally present. The shapes in this category are basins, deep dishes and storage jars.

*Class 4-* This class of ceramics is at first lightly applied with a buff or light cream colour wash over which a slip of red, dull red or chocolate colour is applied. Sometimes the shoulder portion is left unslipped over which paintings are executed. The paintings are executed in red and black. The use of Black colour for a thin outline is found rarely. The red colour is more often used. The common shapes of this ware are thin *ghadas* which is narrow necked with flaring out rims and *lotas*.

*Class 5 (Variant 5A)-* This variety is medium thick in section and has a blackish chocolate colour slip on the outer surface up to the lower ring base and occasionally on the upper part of the interior of the rim and mouth. Paintings are executed in red or mauve colour and black. The black colour was used for outlines. Painted designs usually include festoons, straight lines and horizontal patterns. These are mainly found on the upper half of the outer body while on the inside of the rim festoon designs in either red or black are found. In the centre a light carination is observed and a low ridge. They usually have a ring or disc base. The common shapes are small storage jars and *ghadas*.

*Class 5 (Variant 5B)-* This class is similar to class 1 except for the thickness of the pot. It is a thick ware. The most common shape in this class is of basin. It is devoid of any paintings but is sprinkled with thick colour leaving spot marks.

*Class 5 (Variant 5C)-* It is similar with the class 1 and 2 except for slip colour, which is red to raw sienna. It has a shiny look. Graffiti marks are also found on some pots

*Class 6-* The Kayatha incised ware has also been divided into different classes on the basis of their surface treatment i.e. the colour of the slip. They are:

*Class 6A:* Bowls without any slip or wash.

*Class 6B:* Bowls with red slip inside and a little outside near the rim.

*Class 6C:* Bowls with chocolate slip inside and a little outside near the rim.

*Class 6D:* Deep dishes with a portion left without a slip below the rim outside.

Wavy horizontal light incisions are found on the exterior of the ware. The most common shape is deep and shallow bowls. Wakankar has tried to show some affinity of this ware with Sothi incised pottery (Wakankar 1967).

Period II: This period belongs to Ahar Culture. The pottery classification is as follows:

*Class 7-* This class represents Black and Red Ware and Blotchy Dull Grey Ware. This class is further divided into 3 varieties.

*Variant 7A-* This variant is White Painted Black and Red Ware. It has sharp carinated bowls with white or pinkish white designs. Bowls have corrugations above carination.

*Variant 7B-* This one is same as Variant 7A the only difference is the absence of paintings.

*Variant 7C-* It has blotchy Dull Grey body. The shapes are similar to Variant A and B.

*Class 8:* This class is further divided into 4 varieties.

*Variant 8A-* It is a Burnished Red Slipped Ware with corrugated shoulders and neck.

*Variant 8B-* This is a Burnished Grey and Red Ware with corrugations at shoulder and neck. This Variant is sometimes painted using white colour as well as with incised decorations.

*Variant 8C-* This is a Black Burnished variety having non corrugated storage jars and paintings in white.

*Variant 8 D-* In this variant Red Corrugated Ware has incised decorations and white paintings.

*Class 9-* This variant has hand made blotchy grey dough plates, basins, saucers, dishes and low pans.

*Period III:* This period belongs to Malwa culture. The pottery of this period is divided into various classes.

*Class 10-* This class consists of Black and Red Ware as well as red bowls painted in black colour.

*Class 11-* This is a Black Painted Red Slipped Ware called as Malwa Ware. It is light red in colour and has matt surface. The pottery contains lot of impurities in the clay.

*Class 12-* This class of pottery has cream slip and paintings done in sepia or brown colour. The shapes include bowls, *lotas*, cups and dishes.

*Class 13-* This is Sturdy Thin Ware made out of levigated clay. The shapes in this class are of *lotas* and bowls.

The site was re-excavated by Z.D. Ansari and M.K. Dhavalikar of Deccan College in collaboration with V.S. Wakankar of Vikram University, Ujjain in 1968 (Ansari and Dhavalikar 1975). The thickness of cultural deposit at the site is about 12 m (Ansari and Dhavalikar 1975). The earliest occupants i.e. of Kayatha Culture has been found on the

locally known Hathi-Toda mound whereas it is absent from the Gad mound (Wakankar 1967) where occupation started with the Ahar culture (Ansari and Dhavalikar 1975). The excavations at Kayatha brought to light a fivefold cultural sequence. The dates for chalcolithic periods have been calibrated as follows (Possehl and Rissman 1992):

Period I: Kayatha culture (Ca 2450-2000 BCE)

Period II: Ahar culture (Ca 1950-1700 BCE)

Period III: Malwa culture (Ca 1700-1400 BCE)

Period IV: Early historic (Ca 600-200 BCE)

Period V: Sunga-Kushan-Gupta (Ca 200 BCE-600 CE)

The earliest inhabitants of Kayatha settled in the North Eastern part of the present village on the river bank. Within the excavations no structures were found. However the excavation revealed that the people lived in mud houses having well rammed floors. The floors were made using black and yellow silt alternatively. These wattle and daub walls supported the thatched roof (Dhavalikar 1970; Ansari and Dhavalikar 1975). A similar type of description is mentioned by Wakankar but he has pointed out some variation for the roof. According to him their houses were covered either with grass or mud roofing called as 'ora' (Wakankar 1968-69).

The ceramic assemblage from the Kayatha level at Kayatha has been analyzed differently by Ansari and Dhavalikar (IAR 1967-68:24-25; Dhavalikar 1970; Ansari and Dhavalikar 1975). According to them the four main wares of the Kayatha culture are:

The Kayatha Ware

The Red on Buff Ware

The Kayatha Combed Ware

The Plain Hand-made Ware

***Kayatha Ware or Chocolate Slipped Ware:*** This is considered as important and characteristic ceramic of the Kayatha culture. It is the most predominant ware in the earliest layer. It is made out of well levigated clay and has fine fabric. It is well fired and fast wheel made. The ware has been applied with a thick slip of chocolate colour or variations of brown. Sometimes the slip is very thin giving the impression of just a wash. The slip is sometimes applied from the shoulder up to the belly portion and sometimes up to the base. Over the slip the paintings are executed in violet colour.

The designs however are very few and are mostly linear. The designs are generally found on the outer side but sometimes it has also been painted on the interior. The carination on the shoulder and the belly portion shows that the pot has been luted at the joints. Based on the fabric the ware has been divided into thick and thin fabric. The thin fabric dominates assemblage than the thick fabric. The shapes found in this ware are *Lota* shaped vessels, large storage jars and bowls. Both ring and disc bases are found but the ring bases are more in number (Ansari and Dhavalikar 1975).

**Red on Buff Ware:** This ware has been treated with a buff wash. The wash colour varies from yellow to pink. It is made of extremely fine fabric and is thin in section. However a few sherds with a thick core have also been found. It was made on fast wheel. The major shapes are concave necked pot with bulging body sometimes with a carination and dish. Over the buff surface, paintings are done in deep red to purplish colour which has a tendency to run on. The paintings are generally found on the upper half of the pots. The paintings are geometrical such as linear patterns and diamonds. Graffiti marks are found at the base of some pots (Ansari and Dhavalikar 1975).

Excavators (Ansari and Dhavalikar 1975) are of the opinion that this ceramic did not evolve at the site but was imported from outside. This hypothesis is based on the fact that the ware is absent from the earliest layer (9) and starts appearing from the layer above (8). They also opine that this was a deluxe ware as precious objects such as ornaments were found in a pot of this ware.

**Kayatha Combed Ware:** This ware is without any surface treatment. Sometimes a dark red or purplish slip has been applied. Some sherds have paintings in deep red colour. The characteristic feature of this ware is the incipient incised patterns in sets or groups. The wavy lines and zig-zags are usually executed horizontally. The incisions are usually present below the rim but in case of bowls and basins, it is up to the base. Sometimes the base is also decorated. In a few cases, incisions have also been given to the interior. This ware also occurs in layer 8 and is missing in layer 9. Excavator is of the opinion that the manufacturing technique was probably borrowed from Kayatha Ware (Ansari and Dhavalikar 1975).

**Plain Handmade Ware:** This is a daily use ware and the most pre-dominant ware in the assemblage. No surface treatment is given to it. In some cases a pale red slip has been applied. The fabric is coarse and crude and not been fired well (Ansari and Dhavalikar 1975).

In the first excavation Pre Parmara and Parmara levels were identified which are missing in the second excavation. The excavators are of the opinion that the nucleus for the Kayatha culture is not Kayatha and that it emerged somewhere else (Wakankar 1968-69; Dhavalikar 1970; Ansari and Dhavalikar 1971; Ansari and Dhavalikar 1975). There is some ambiguity about the sterile layer between the Kayatha Culture and Ahar Culture. Wakankar (1967) after the initial excavations at Kayatha has reported a sterile layer which thins out to hardly an inch in the corresponding trenches. The sterile layer is reported to be approximately 15 cm after the second season of excavation (IAR 1967-68, 24-25; Ansari and Dhavalikar 1971; Ansari and Dhavalikar 1975). Wakankar (1976) however after the second season reports that there is hardly any gap between the Kayatha Culture and the Ahar Culture.

**Excavations at Dangwada:** The site of Dangwada (5°30'E, 23°10'N) was excavated jointly by Directorate of Archaeology and Museums, Madhya Pradesh and Vikram university Ujjain. The site was excavated for three seasons from 1978-81. In the first

season of excavation Period I have been divided into two sub-phases, IA characterized by the Ahar pottery and IB by the Malwa pottery. The cultural material of the two sub-phases is similar except the terracotta bulls which are available in large numbers in the former. A few mud-houses were encountered in the lowest levels. The houses were rectangular on plan and probably had roofs of wood, plastered with mud. The floors were made of rammed gravel and sand plastered with yellow earth.

A most significant discovery is of a few urn-burials encircled by stones found inside the houses. The urn of Lustrous Red Ware contained burnt bones, and a few dishes and terracotta bulls. Apart from this a potsherd showing a painting of *Pashupati* in black on red; a terracotta mould for copper axes and a pot-stand with incised animal figures on the exterior. Period I came to an end with a large-scale conflagration (IAR 1978-79:70-71).

In the second season of excavation Period IA is identified on the basis of plain and painted Black and Red Ware, painted Black and Red Ware, Incised Grey Wares and Lustrous Red Ware. The white painted designs on the Black and Red Ware include simple bands, straight and wavy lines, strokes and dots. The painting rubs off very easily. Painted Black and Red Ware predominate over the plain one. Plain Red Ware vases in most of the cases have corrugated shoulders. The cultural material of this phase includes microlithic tools, copper, stone pestles, a ball and terracotta bulls. Two urn-burials of Burnished Red Ware with corrugated shoulders and applique design were encountered in this phase. These pots contained a few burnt bones, possibly of human. No structural remains, except flooring made of small pebbles was encountered.

Period IB, represented by Malwa chalcolithic culture is sub-divided into 4 sub-phases.

Period IB (i) is characterized by the Malwa chalcolithic culture along with a limited quantity of the Ahar culture. The cultural material consists of microlithic tools and stone objects like querns, pestles, balls, hammerstones. No structural remains were noticed.

Period IB (ii) is represented by structural remains. The ceramic industry of Period IA continues. The only change noticeable is Ahar type ceramic is limited in number, however the painted designs are more elaborate and the animal designs make their first appearance. The most important structure is of a shrine (1.2x0.7 m) built of bricks and plastered with mud. Although no objects were found in the shrine itself, a few conical objects, probably symbolic representation of mother goddess, and a few miniature lamps were found lying in the vicinity.

A rectangular sacrificial pit, measuring 1.95 x 1.50 m, was encountered at a distance of 1.15 m towards south of the shrine. Another structural complex belonging to religious activity was discovered. It contains a small square chamber having pot stands, jars and other pottery types, adjacent room with an opening flanked by pillars surmounted by

an arch, and a large rectangular room marked by post-holes. The complex yielded painted and plain pottery, charcoal and charred grains, terracotta bulls of various types, steatite bead, etc.

Period IB (iii) has elliptical structure standing on wooden posts and a 2 kitchen complexes. The important material discovered includes copper chisel, terracotta mould for copper axes, bone tools, terracotta ear-lobes, balls, marbles; and stone balls and marbles.

Period IB (iv) there is complete absence of bull design on the pottery. The painted designs are confined to simple bands, wavy lines and occasional hill symbol. This period ended due to a large-scale conflagration (IAR 1979-80:54-55).

After the third season of excavation the chronology of the site has been completely modified, which is as follows (Wakankar and Khare 1981).

Period I: This period is further sub divided into Ia as Pure Kayatha and Ib as Kayatha and Black and Red Ware.

Period II: It has been subdivided into period IIa in which Ahar dominates the assemblage and there is total absence of Kayatha and incised potsherds. Where as in IIb Malwa dominates but Ahar is equally present in the assemblage.

Period III: This is called as Malwa Culture, on the basis of presence and absence of bull, sun symbol, *yajna-kundas* this particular period has been subdivided into 3 phases namely IIIId, IIIIe and IIIIf.

Period IV: This period has been classified into three sub periods. IVa has Black and red ware, grey ware and early N.B.P. as well as cast-copper coin. In phase IVb ceramic assemblage consists of Black and Red Ware and late N.B.P. In phase IVc excavator proposes that there is Malwa with Pre Mauryan ceramic industry.

Period V: The ceramic consists of Black and Red Ware, Red Ware, dish-cum-bowls, cast copper coins, Ujjaini coins, inscribed seals, *yajna-shala* and Siva-temple remains.

Period VI: Presence of Painted Red Ware, dish-cum-bowls and Kshatrapa coins.

Period VII: Painted Red Ware; Terracotta Buddha and Hariti figures inscribed seals, Vishnu and Mahishasurmardini, Lajjaagauri, figures of horse and elephant riders.

Period VIII: Pratihar, Paramar

Period IX: Glazed Ware of Muslim period and Muslim coins found (IAR 1982-83:59-61).

**Excavations at Runija:** The site (23° 10' N. 75° 16.3' E') is situated in the Badnagar Tehsil of Ujjain District, Madhya Pradesh. It was first reported in 1953 by V.S. Wakankar. The site was jointly excavated by M.D. Khare of Directorate of Archaeology and Museum,



Madhya Pradesh and V.S. Wakankar of Vikram University in 1981. In IAR (1980-81:39), cultural sequence has 5 cultural periods in three trenches RNJ 1, RNJ II and RNJ III starting with Ahar culture up to Gupta Period. Out of these period I belongs to Chalcolithic period.

Period IA is represented by chalcolithic pottery of Ahar types Red Ware, Grey Ware and White Painted Black and Red Ware. The shapes are dish-on-stand and dishes with ring base.

Period IB is characterized by the introduction of a new ware with paintings in red as well as black over its matt surface termed as Runija Ware. Designs consists of loops, criss-cross patterns, scorpion, fish, snake, sun, diamond etc., most of the shapes of the earlier phase continues in this period. Terracotta figurines of mother goddess were also reported from this sub period. A huge mud wall with very thick wooden beams and thick mud roof has been noticed in the upper levels. This sub-period came to an end as a result of a large-scale conflagration. This chronology was further improvised by Wakankar (1980) as follows:

Period I: Kayatha

Period II: Ahar Culture

Period III: It is divided into 4 sub phases such as Phase I Malwa Culture with Ahar domination, Phase II Malwa Culture, Phase III Malwa Culture with Runija Ware and Phase IV Malwa Last Phase. After Phase IV the site was divested by flood and was occupied by Pre-Mauryan Black and Red Ware.

**Excavation at Mandsaur:** The site of Mandsaur was excavated by V.S. Wakankar and V.K. Bajpai in April 1975. The site yielded assemblages from the Stone Age to Early Historic. The lowest layer is that of Ahar with White Painted Black and Red Ware. Above the Ahar levels, the Kayatha layer is present. However, the assemblage from Kayatha is very limited in nature (Wakankar and Bajpai 1981).

**Excavation at Azad Nagar:** The site of Azad Nagar in Indore was excavated by V.K. Bajpai and V.S. Wakankar in 1974. Out of the four mounds present at the site, only two were excavated. The cultural sequence yielded by the excavation is:

Period I: Kayatha	(2100-1800 BCE)
Period II: Malwa	(1800-1300 BCE)
Period III: Early Historic	(100 BCE- 200 CE)

There is no cultural gap between the Kayatha level and the Malwa level. The Ahar Culture is conspicuous by its absence. The excavator has divided the Kayatha level into two phases viz. phase I and phase II. Potteries yielded are similar to those found from Kayatha. Red Painted Chocolate Ware, Red and Black Painted Buff Ware, Incised Rough Ware, Buff, Red or Orange Slipped Ware, Muddy Slipped Ware, Matt Surface Ware are among the prominent wares found from the site. "A new element in phase-II

is the introduction of black designs of Kayatha Ware, which might prove the genetic source of Malwa Painted Ware, outside the province but in its heart itself" (Wakankar 1981:90).

Rectangular houses made of mud walls were found. The roofs were probably supported by wooden posts. Another important feature of the excavation was the presence of a child burial having north-south orientation. The child is wearing a conch shell necklace with a pendant of wild boar tusk. Near the right shoulder found a terracotta cake and a blade and stone was found near the head. The lower legs are missing which might have been chopped before being buried. This is the only evidence of burial practice from the Kayatha Culture (Wakankar 1976,1981).

### **His Contributions**

Explorations conducted by him have brought to light many Chalcolithic settlements in the Central India which has enriched the area for future studies. The excavations conducted by him have made very important contributions. For the first time in the history of Central India the earliest agricultural community in the form of Kayatha culture was discovered. The excavations at Kayatha proved for the first time that the Ahar culture people migrated into Central India. This period has been identified at various sites so far excavated in this area. Though this culture has been well established in Central India, the major problem which has not been resolved yet is the chronological positioning of this culture in the regional stratigraphy.

This particular issue has been raised in a recent work by Prasad (2015). In her work she has compiled information from all the excavated sites belonging to Kayatha Culture and shows that Kayatha existed independently at certain sites such as Kayatha, whereas at some sites along with the Malwa culture such as at Pipilya Lorka as well as with Ahar culture at Kotra and Pipilya Lorka. Moreover it succeeds the Malwa and the Ahar culture at the site of Eran, whereas it pre-dates Ahar and Malwa at Kayatha, Dangwada and Kotra. In such conditions one has to believe that Kayatha culture has had a long existence. But then the chronological problems prevent us in placing the Kayatha culture in a right chronology. According to Prasad (2015) this issue has arisen because of the wrong identification of Kayatha Ware, which is Chocolate Slipped Ware. This Ware is not the sole product of Kayatha but also one finds this along with Ahar and Malwa. Due to which this chronological positioning has been an issue. She proposes that instead of Chocolate Slip ware, the characteristic ceramic is Red on Cream and Violet Slipped Ware. This work shows that the identification done by Wakankar and later on by Ansari and Dhavalikar needs to be checked and this culture should be re-excavated to understand this issue.

Wakankar on the basis of available data from his explorations and excavations has tried to understand the religious aspects of Chalcolithic cultures in Central India. The Ahar culture people were bull worshippers and they buried their dead within the house as the evidence from Mandsaur shows (Wakankar 1976). He calls Malwa people

as worshipper of bull, *Pashupati*, sun and mother goddess. On the basis of rectangular and up sided temples, fire alters of various types and *Griha Mandiras* or House Temples he has equated Malwa culture with Vedic traditions. These people introduced fire-sacrifice in the form of *Yajnasala* and *Yajnakunda* which are found from Navdatoli. Mother goddess cult was identified on the basis of figurine on storage jar from Navadatoli and terracotta figurines from the sites of Nagda, Dangwada and Kayatha (Wakankar 1976). He is of the opinion that spouted vessels were not the product of foreign contact. Such type of vessels were found by him at the site of Manoti in earlier levels than Malwa. Based on this he calls these vessels as used for pouring *Ghee* in fire alters (Wakankar 1976). This hypothesis or observation made by him is of great importance in light of recent advancement made in sciences in archaeology. At the site of Kotada Bhadli in District Kachchh, not similar but ladles of terracotta were found in excavations. These ladles were analyzed for lipid profile or residue analysis and the results shows that it contained milk (Chakraborty et al. 2020, Chakraborty 2021). If such modern techniques are used then one might be able to justify the statement made by Wakankar scientifically.

Wakankar (1976) opines that the sudden replacement of Kayatha culture by Ahar culture was an outcome of invasion by Ahar people. This he tries to prove on the basis of cultural material from Kayatha and Maheshwar, where without any gap there is sudden change in ceramic tradition. But this invasion was restricted to the cities and villages such as Meen, Nepawali, Azadnagar, Indore etc don't show such evidence. These displaced Kayatha culture people migrates towards east in Middle Betwa valley establishes Eran Culture and after a time lapse they return to back to Malwa. This later migration into Malwa is identified as Malwa culture. The archaeological evidence for this migration or development of Kayatha into Malwa culture is based on the evidence from the site of Azadnagar where Kayatha pottery gradually evolves into Malwa ware.

He has tried to associate the *Pauranic* traditions with this invasion, displacement of culture and reemergence of new cultural entity in the form of Malwa culture. He is probably the first person to understand Puranic tradition in collaboration with local Chalcolithic cultures (Figure 2). Such type of work has been done for Harappan civilization or in later periods to understand Ramayana and Mahabhartha. Taking into consideration *Pauranic* traditions like *Agni* and *Vayu Puran* as well as Mahabharat, Wakankar (1967, 1976) has tried to understand archaeological record of Central India. According to these traditions *Mandhtra Haihayas* were the first agricultural people. These people defeated forest tribes and established their settlements on Malwa plateau and in Narmada Valley. These *Haihayas* were identified with Kayatha culture as being the agriculturist of Central India.

These *Haihayas* in quest of expansion came in conflict with *Bhargavas* of Gujarat. In this conflict *Haihayas* lost to *Bhargavas* and they were uprooted from their original homeland as well. These *Bhargavas* have been identified as Painted Black and Red Ware Culture of Gujarat found in the lowest levels at Lothal. These *Bhargavas* maintained co-

operation with the later *Haihayas*. These Later *Haihayas* have been identified as Malwa Culture. Hence within Malwa culture Painted Black and Red Ware continues. These Later *Haihayas* or Malwa culture was replaced by Painted Grey Ware people, those are identified as *Pradyotas*. In regards to origin of these cultures, he (1987a) traces them back to the Harappan civilization. After the decline of Saraswat (i.e. Harappan) civilization they migrated into various parts of India. These people established new cultures such as Kayatha in Malwa, Ahar in Rajasthan, OCP in Uttar Pradesh and Rangpur in Gujarat. All these cultures are basically Vedic cultures related to Saraswat civilization.

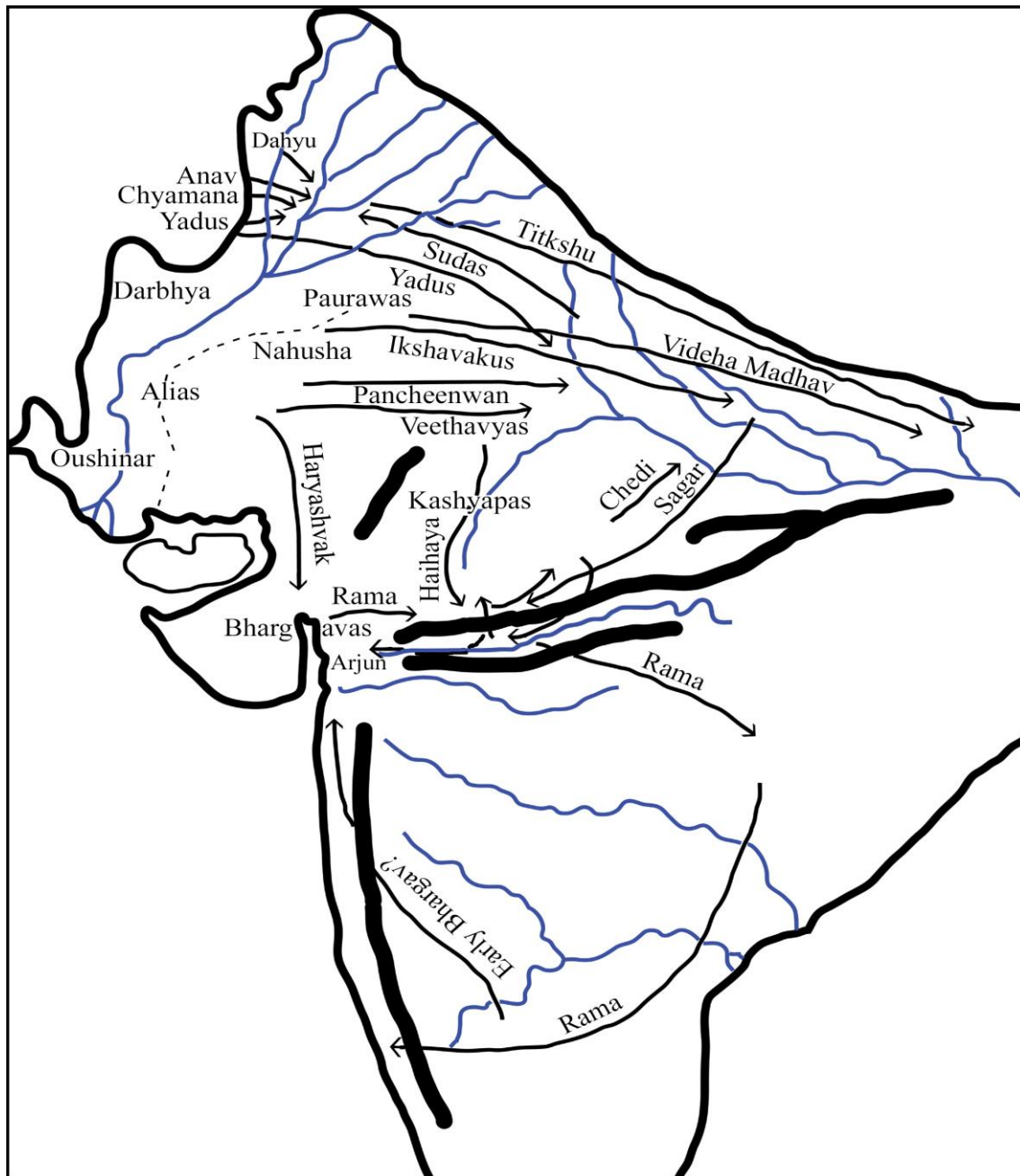


Figure 2: Chalcolithic Migration (Adapted Wakankar 1967)

SCRIPT OF THE CHALCOLITHIC PEOPLE															
S.No.	Symbols on Pottery	Site	No. of Indus Script ACC John Marshall	Harappan Equivalent	Brahmi Equivalent	Reference	Nagari Equivalent	S.No.	Symbols on Pottery	Site	No. of Indus Script ACC John Marshall	Harappan Equivalent	Brahmi Equivalent	Reference	Nagari Equivalent
1	I	KTH	264	I	I	Nanaghat	ॐ	28	^	KTH	^ ^, 101	^ ^	^	Nanaghat	ॐ
2	II	KTH	265	II	II	Nanaghat	ॐ	29	< >		# H.P. 285, 273	< < ^	ॐ	Kushan	ॐ
3	III	KTH	266	III	III	Nanaghat	ॐ	30	DC		47	DC	ॐ	Nana Quisse	ॐ
4	IIII	KTH	R5.HP.227	IIII	IIII		ॐ	31	ॐ	NGD		ॐ	ॐ	Ujjain Coins	ॐ
5	ॐ	KTH		ॐ	ॐ		ॐ	32	ॐ		XXIX 153	ॐ	ॐ		
6	ॐ	KTH		ॐ	ॐ		ॐ	33	ॐ		XXVII 154	ॐ	ॐ		
7	ॐ	NVS	82	ॐ	ॐ	Ashok	ॐ	34	ॐ			ॐ	ॐ		
8	ॐ	NGD	82	ॐ	ॐ	Ashok	ॐ	35	ॐ		XXX 155	ॐ	ॐ		
9	ॐ	NGD	II	ॐ	ॐ		ॐ	36	ॐ	NVS		ॐ	ॐ	Asmaka	
10	ॐ	NVT		ॐ	ॐ		ॐ	37	ॐ			ॐ	ॐ	Bhimbetka	
11	ॐ	NVS		ॐ	ॐ		ॐ	38	ॐ	NVT		ॐ	ॐ		
12	ॐ	NGD	RJD	ॐ	ॐ		ॐ	39	ॐ	NVT	113	ॐ	ॐ	Nanaghat	ॐ
13	ॐ	KTH		ॐ	ॐ		ॐ	40	ॐ	KTH	27 HP 296	ॐ	ॐ	Nana	ॐ
14	ॐ	NVT	57 141, HP.	ॐ	ॐ		ॐ	41	ॐ	KTH	RNGP 52, HP 180	ॐ	ॐ	UJJ Punch	ॐ
15	ॐ	KTH	98	ॐ	ॐ		ॐ	42	ॐ	UJJ	HP 242	ॐ	ॐ		
16	ॐ	NVT		ॐ	ॐ		ॐ	43	ॐ			ॐ	ॐ		
17	ॐ	NGD	133	ॐ	ॐ		ॐ	44	ॐ		274	ॐ	ॐ	Mathura	ॐ
18	ॐ	NVS	132	ॐ	ॐ	Shahabad	ॐ	45	ॐ	KTH	296	ॐ	ॐ	Nasik Ushav	ॐ
19	ॐ	NVS	96	ॐ	ॐ		ॐ	46	ॐ	KTH		ॐ	ॐ	0 ॐ	ॐ
20	ॐ	NVS		ॐ	ॐ		ॐ	47	ॐ	KTH	219 HP 74	ॐ	ॐ	0 Girnar	ॐ
21	ॐ	NVS		ॐ	ॐ	Shahabad	ॐ	48	ॐ	KTH	XLVIII 232	ॐ	ॐ	0 Nana	ॐ
22	ॐ	NVS	3	ॐ	ॐ		ॐ							0 Mathura	ॐ
23	ॐ	NVS		ॐ	ॐ		ॐ								
24	ॐ	NVS	HP 39	ॐ	ॐ		ॐ								
25	ॐ	NVS	9	ॐ	ॐ	Andhra Coins	ॐ								
26	ॐ	NVS	242 HP.182	ॐ	ॐ	Punch Mark	ॐ								
27	ॐ	NVS	237 HP.263	ॐ	ॐ		ॐ								

Figure 3: Chalcolithic Script, Pottery Symbols and Symbols on Ujjaini Coins  
(Adapted Wakankar 1967)

One more contribution done by Wakankar in the field of Chalcolithic studies is the identification of script. Again, he was probably the first person to take into account the graffiti marks on the pottery of Chalcolithic period as script and tried to show its phonetic value. Wakankar (1967) used symbols on Chalcolithic pottery from the sites of Kayatha, Nevasa, Nagda, Navda Toli and Ujjain. These marks on the pottery were compared with Harappan civilization script, Brahmi script and modern Nagri script (Figure 3). This was the first attempt to understand the Chalcolithic script.

One can see his quest to collaborate ancient text with archaeological periods in identification of Harappan civilization as Vedic culture. Wakankar (1987b) has made some bold remarks as far as Vedic Aryans are concerned that 'Vedic Aryans came from Central Asia and entered and occupied Punjab and then spread over the whole peninsula, has been so hammered into the Indian minds that even four decades after Independence, the inferiority complex of the Indian Government education system sticks to our thinking' (1987b:29). Through his survey of Saraswati river he shows that there are Pre Harappan cultures (now these Pre Harappan cultures are called as Early Harappan cultures) in Haryana and Rajasthan, which are indigenous agricultural settlements and has no evidence of any migration from region outside India. Taking into account Muir's original Sanskrit Text and Manusmriti, he showed that Vedic Aryan moved from east to west through Brahmavarta, Kurukshetra, Matsya, Panchal, Saurashtra and Brahmrshi country. The land between river Saraswati and Drishtvati has been called as Brahmavarta by Manusmriti. Citing the reference from Rigveda he

shows that some people due to differences in religious matters move towards west i.e. Iran. These people have been identified as Iranian Zarathushtra or Ahurmazda or *Asuras* or *Ayajwans* (i.e. who don't perform *Yajnya*). *Aitreya* Brahman makes a commentary that these *Asuras* use to disturb *Yajnya* performed by *Devatas*. In order to protect these *Yajna* place a wall around it was constructed. This literary information has been collaborated by him in connections of citadel walls at Kalibangan. He has stretched back the date of Vedic literature to 10,000 BCE or more on the basis of rock paintings of fish, tortoise and boar in Mesolithic rock art in Central India. According to him this is the representation of Vishnu incarnations. The second basis is the story of Vratrasur who frozen the rivers and barred their flow. This he has equated with the Upper Palaeolithic Ice Age. During the beginning of Holocene period these rivers were released by thunder storms i.e. Indra. This chronology of Vedic literature starting with Upper Palaeolithic he has equated with different cultural formations such Vedic culture started with Mesolithic settlements with hunting-gathering economy, which develops into rural agricultural communities of Vedic Period. These rural cultures develop into urban centers of Harappan period. On the basis of Vedic literature, he called Indus-Harappan civilization as Vedic Sindhu-Saraswati Civilization. He (1987c) refused the theory that Aryan's were wanderers on the basis of *Yajurveda*, which has references to fired bricks, *Gramapati*, *Ashwapati*, *Pasupati*, *Rathakar*, *Taptaks*, *Senapati* etc. These words show that they had well established cities. Wakankar (1987a) has equated the word Aryan and its meaning as the person who does good deed and has no caste relation.

V.S. Wakankar with his explorations, excavations and archaeological collaboration with literature has tried to enrich the Indian culture. His work shows the importance of literary traditions even in the field of proto-history especially for Chalcolithic cultures. Such a personality with immense hard work and knowledge was rightly awarded with *Padamshree* in the year 1975 which is not the felicitation of a person or individual but the felicitation of a thought and hard work.

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