
Cup Marks in Jharkhand: An Ethnographic Observation

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Abstract: Cup marks or cupules are one of the most enigmatic evidence recovered in archaeological context right from Palaeolithic age. The very first report of cup marks in India came from Almora region of Uttarakhand by Rivett Carnac in year 1879. Other important such discoveries are from Bhimbetka, Daraki Chattan and Katholia of Madhya Pradesh and Guhala of Rajasthan. Apart from these, cup marks are discovered from almost every part of the subcontinent in different archaeological contexts. Evidence of cup marks at megalithic sites in India were observed over a capstone of a Dolmenoid cist at Hirapur of Vidarbha region, Junapani, and from South India, Mudugal, Akilivalasa, Prabhagiripatanam, Pallicondah and Madumala. In Jharkhand, cup marks are found over megalithic capstone, stone outcrops, caves and rock shelters. They are carved in irregular, linear and bilinear patterns, pairs and clusters. The motive behind carving these cup marks is still unknown. Few scholars have worked over astronomical aspects of cup marks at megalithic sites. Present paper aims to understand the meaning of these cup marks, considering the ethnographic counterparts and ritualistic believes among the tribal inhabitants of Jharkhand.

Keywords: Cup Marks, Til- Goti, Chalgoti, Khanrh, Altars, Rituals, Capstone

Introduction

Cup marks or cupules are one of the oldest human creation over boulders, stone outcrops, floors of rock shelters and stone surfaces. They are the most debatable evidence, since prehistoric times, as scholars have different ideas and interpretation regarding interpretation and function of these depressions over the surface of rocks. These cup marks are considered as art, games, ritual altars and sometimes they are considered to be used for breaking nuts by the prehistoric man. After years of debates over these circular depressions, they remained enigmatic since prehistoric period.

The first evidence of cup marks in India comes from Almora region of present Uttarakhand state (Rivett Carnac 1879: 1- 16). Subsequently, these cup marks are found at prehistoric sites of Daraki Chattan, Bhimbetka, Katholia, Guhala, Kanyadeh, Bajni Bhat (Kumar *et al* 1992: 13-55; Kumar 1995: 17-28; Bednarik 1996: 35; Kumar 2002: 5-20; Kumar 2006: 51-55; Sharma *et al* 2009: 130-139; Sharma *et al* 1992: 84), in northern and central India and Mallur, Devapur and Kupgal in Shorapur doab of Karnataka in south

India (Padayya 1976: 35- 38). Apart from these, they are also found at megalithic sites and temple complexes. Therefore, their antiquity can be assigned tentatively from Paleolithic age till historical phase (Kumar 2006: 51-55).

Evidence of cup marks from megalithic sites in India was observed over a capstone of a Dolmenoid cist at Hirapur of Vidarbha region (Pawar 2012: 83- 86), stone circle of Junapani (Abbas *et al.* 2010; Abbas 2014; Menon *et al.* 2011; Vahiya and Menon 2011), Bramhagiri (Arjun 2014), Mudugal (Menon *et al.* 2011), Akilivalasa, Prabhagiripatanam (Chejarla 2017), Pallicondah (Walhouse 1878), Madumala (Thakur 2013), etc.

Many megalithic sites in Jharkhand also yielded evidence of cup marks from the capstones of megaliths as well (Das 2009; Das 2014; Imam 2014; Das 2018). Apart from this, they are also found over granite out crops in Khunti region (Polley *et al.* 2015: 34-48). Such cup marks were observed over the capstones at many megalithic sites. These cup marks are carved in irregular, linear and bilinear patterns (Shekhar and Joglekar 2015; 2016; 2017). The motive behind making cup marks over megalithic capstones is still enigmatic.

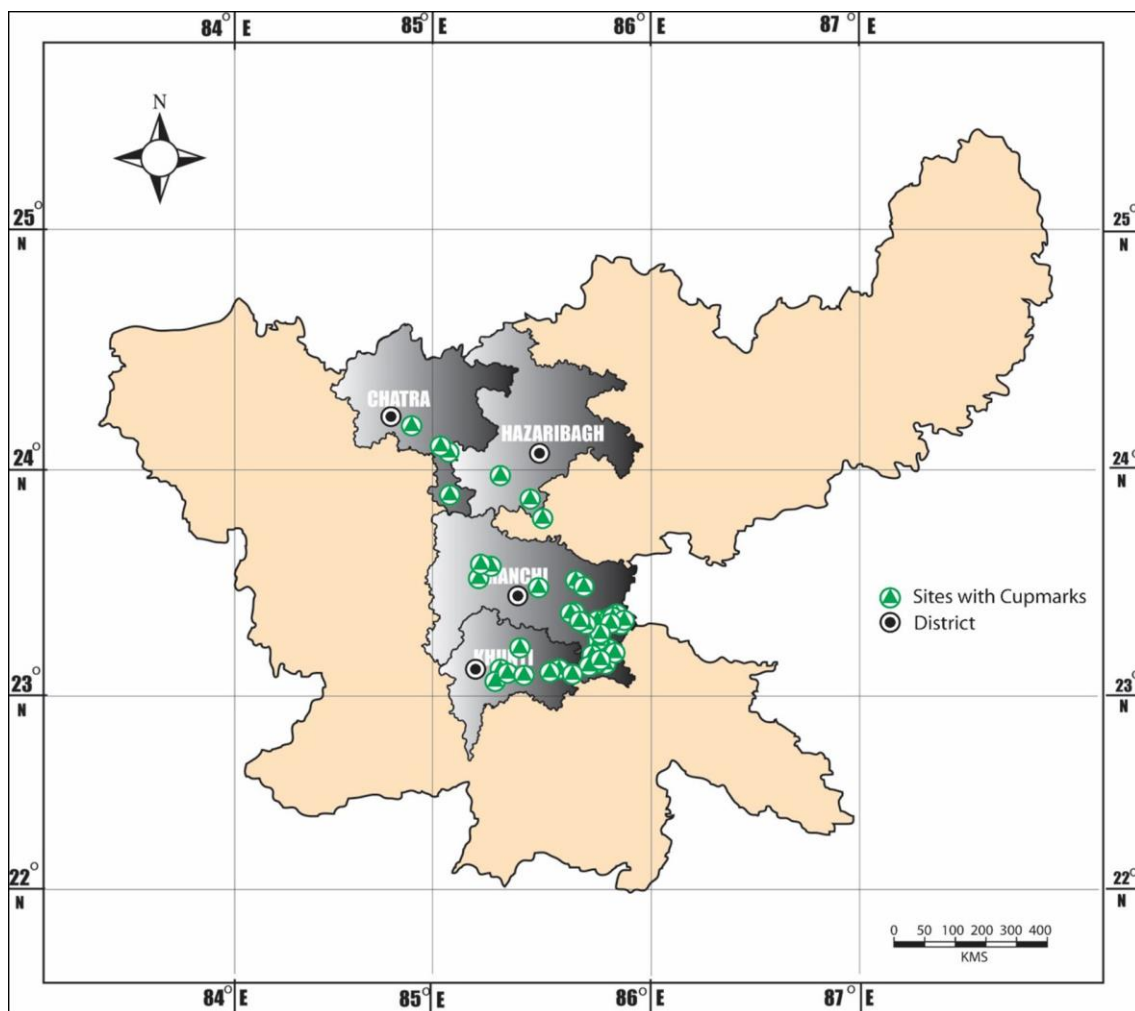
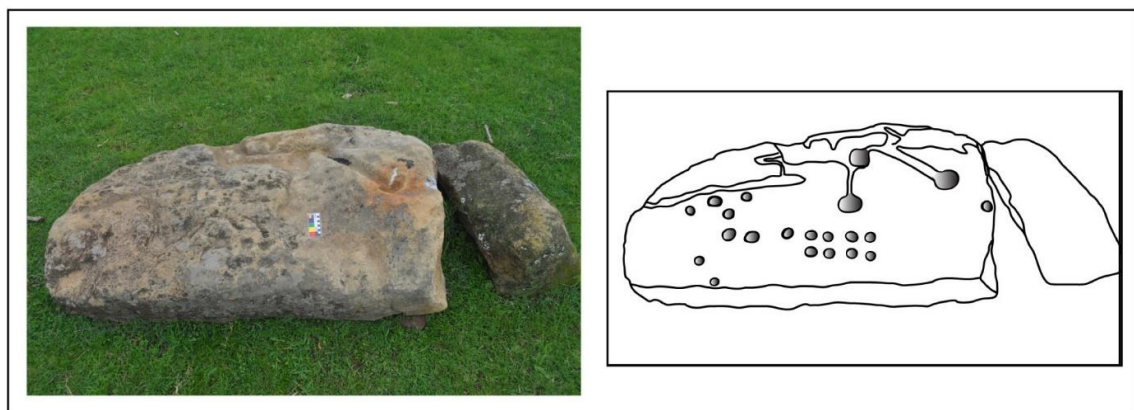


Figure 1: Map of Jharkhand Showing Distribution of Important Cup Mark Sites



a



b



c



d

Figure 2: a. Megalithic site of Pankhri Baruwadih, Barkagaon block, Hazaribagh District, b. Cup marks over a capstone resembles ritual alter, c. Cup marks over sandstone out crop near the site, d. Evidence of grinding cupule at the quarry source

Present Work and Study Area

Present work is focussed on occurrence of cup marks bears in different archaeological contexts, such as, over granite and sandstone out crops, capstones of megaliths and caves and rock shelters in different regions of Jharkhand. The area of study spread in four different districts, Chatra, Hazaribagh, Ranchi and Khunti districts (**Figure 1**). These cup marks or cupules were observed in different archaeological contexts they can be divided into two forms; i. small cupules or cup marks and, ii. grinding cupules. Both types were found on bare surfaces of granite and sandstone outcrops and capstones or megalithic slabs. Grinding cupules occurs in single or pair and small cup marks are found in irregular, linear, bilinear and multilinear patterns. Details of the sites given here including, Megalithic sites, open-air outcrops of granite and sandstones as well as caves and rock shelters.



Figure 3: Cup marks resembling game board at different capstones of megaliths at the site of Besnadih, Tamar block, Ranchi district

Megalithic Sites

Pankhri Baruwadih (23°52'20"N, 85°14'6"E): The site is located in Barkagaon block in Hazaribagh district, on a barren land, left side of Hazaribagh- Barkagaon road, around 25 km southwest of Hazaribagh town. The site is roughly circular in nature enclosed by circular ditch, which can be observed by detail observation. The typology of megaliths comprises mostly raised and fallen menhirs, although some of the structures seem to be stone slabs only. The site has several rectangular game boards over Megalithic slabs, locally known as "*Pait*", still a popular game among children in the region. Apart from this, many slabs bear cup marks in linear, bilinear and irregular patterns. One of the slabs has 31 cup marks over it. These cup marks were probably made as game board or

sacrificial altars, which has archaeological parallel worldwide (Walhouse 1878: 21; Santos 1962, cited in Coimbra 2001: 2; Gosso 2010: 205; Ellis and Ballin 2019). An evidence of patination over the slab indicates traces of ritual performed, as the tribal of the region practices in different ceremonies, including death, to invoke ancestral spirits using vermilion, and mustard oil. Around 500 m southeast of the site, there is a sandstone outcrop, showing the evidence of stone quarrying to construct the megaliths. It bears some grinding holes and cup marks in bilinear pattern (**Figure 2**).

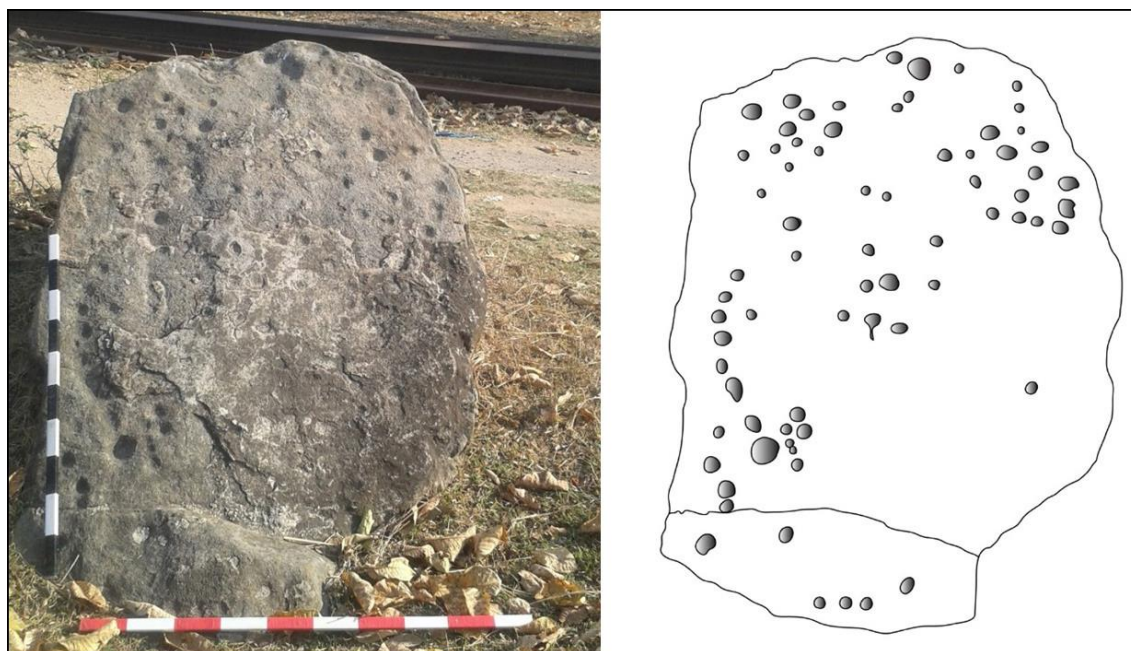


Figure 4: Cluster of Cupmarks over a menhir in irregular pattern along Ranchi-Angara road at the site of Hesal, Ranchi district

Mander (23°46'57"N, 85°02'01"E): The site is located on left side of Tandwa-Thetangi road in Chatra district. The megaliths seem to be perfectly carved by iron tools with sharp edges. Two types of structures; menhirs and slabs were observed. Some slabs have cup marks in bilinear patterns resembling the game board. One rectangular capstone has 30 cup marks over it in bilinear pattern.

Besnadih Locality I and Locality II (23°04'21"N; 85°41'28"E & 23°04'20"N; 85°41'15"E): Almost all capstones of megalithic monuments bear cup marks and grinding holes. Grinding holes are used to dehusking grains. cup marks are bears in double and triple rows and also in irregular pattern (**Figure 3**).

Hesal (23°23'57"N, 85°28'00"E): A menhir is located on the left side of Ranchi-Angara road in Angara block of Ranchi District. It has cup marks in irregular pattern over it. It seems that the stone was actually a capstone of some nearby dolmen, reused as a menhirs by some other people who settled in the region after the megalith people. Total 72 cup marks were found over the stone monument in irregular pattern (**Figure 4**).

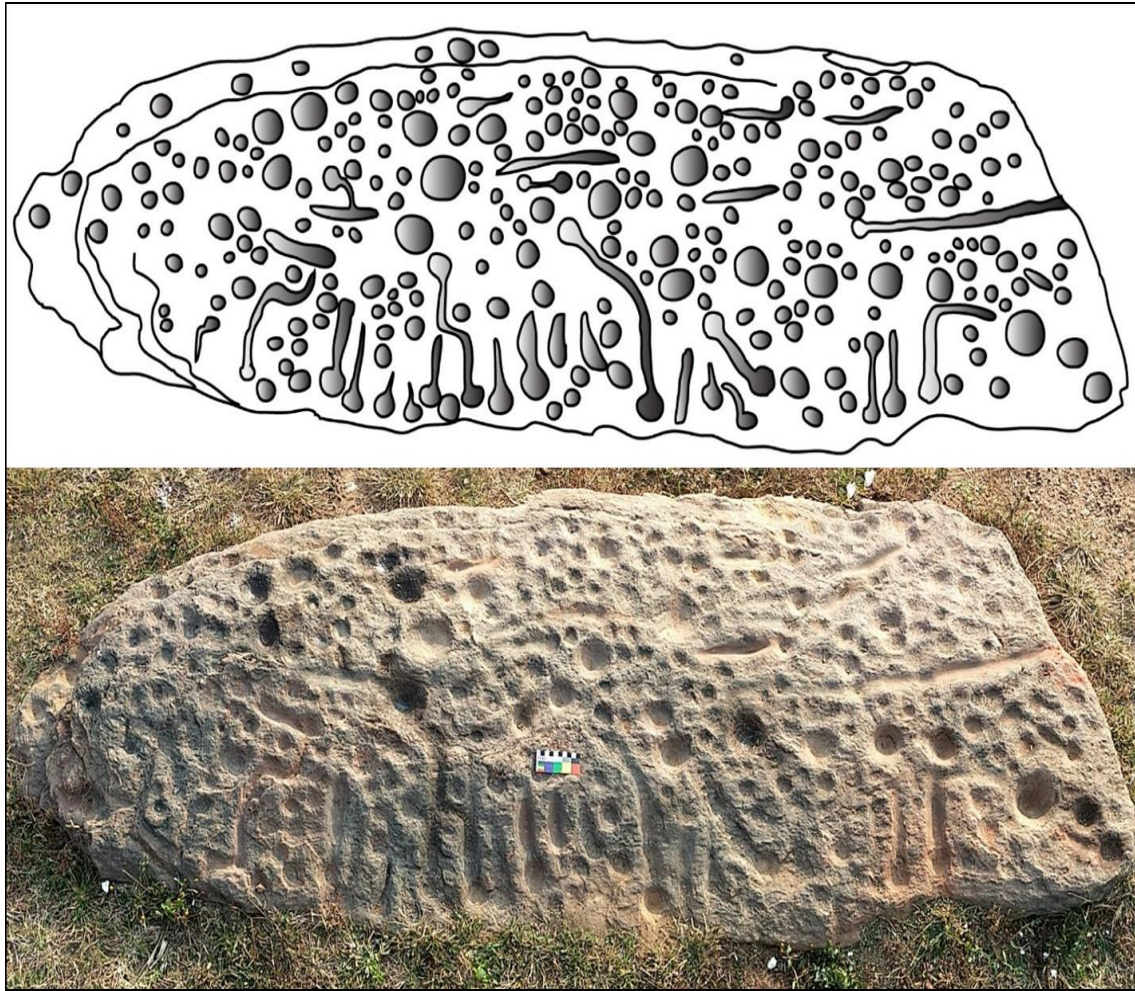


Figure 5: Cup marks in irregular pattern showing the evidence of recent ritual performed at Murchu, Ranchi district

Murchu (23° 27'23" N; 85° 10'55"E): The site of Murchu is located in Ratu block, in western part of the district. 275 cup marks are carved over a Megalithic slab at a site located adjacent to a primary school in Murchu village, 5 kms right to the Ranchi-Lohardaga highway. The site has two megalithic structure, a menhir and a slab over an elevated tract of lateritic deposit. The slab is 50 m away to a menhir, lied in east to west orientation (**Figure 5**). The site is locally known as *Mahadania* and the slab is worshipped during *Sohrai* festival by the local inhabitants. The cup marks are filled by mustard and *Karanj* oil and some of them are used as *diya*, as these cup marks were used as ritual lamp. Some of the cup marks are joined together with a connected engraved depression, so that the fluid can be transferred from one to another. Some of them are connected with long tunnel kind of depression, which helps the fluid to drive out from the slab. Since, they are carved in olden time the antiquity of such ritual seems to be very ancient, which is still continued. This ritual is performed to invoke ancestral spirits, so that they bestow their blessings to the society. Calling ancestral spirit is a common phenomenon during religious ceremonies and festivals. Sacrifice of 12 chickens was offered to the ancestral spirit on the occasion.

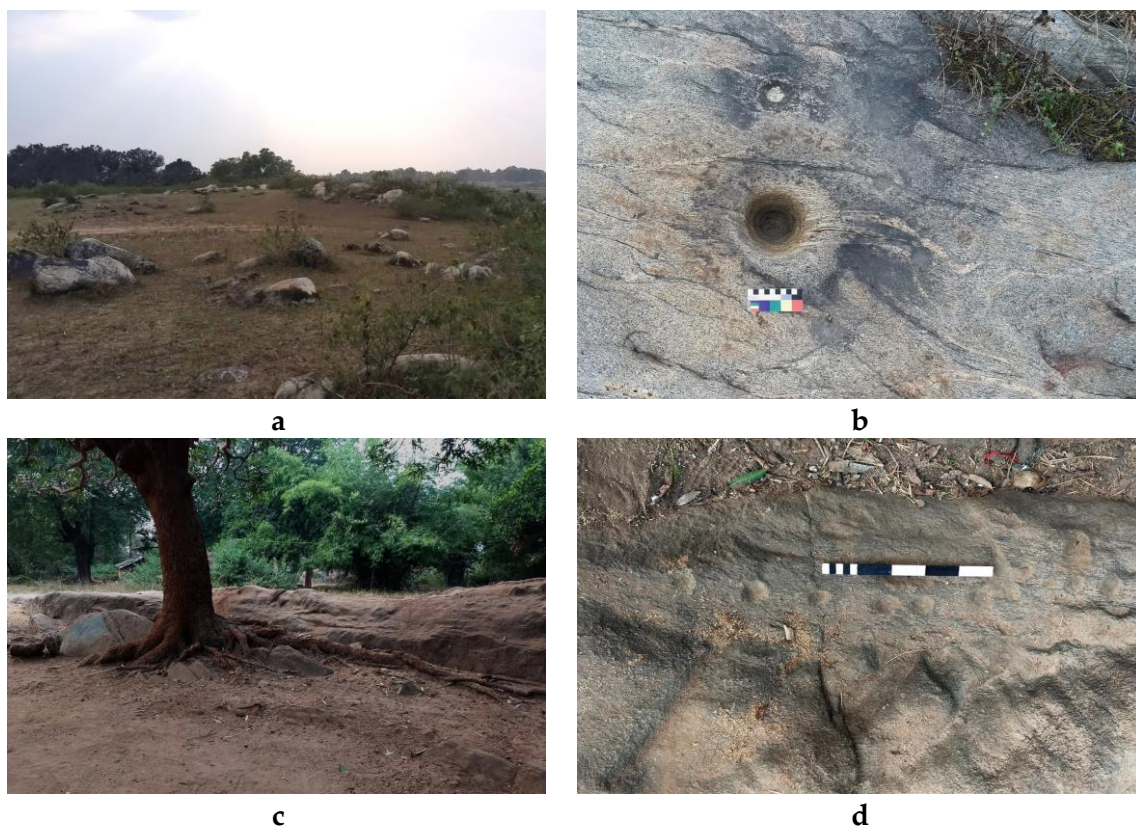


Figure 6: a. Granite out crop near Mahil village, Khunti district, b. Grinding cupule and other cup marks over granite surface, c. Granite out crop at Mahil village, and d. A Single row of 9 cup marks



Figure 7: Cluster of cup marks, where religious rituals are performed by the villagers at the site of Kumharia village, Ranchi district



Figure 8. Cup marks over granite surface near Sarna sthal (Sacred grooves) in Ranchi

Stone Outcrops

Another type of site, which gave evidence of cup marks are stone outcrops of granite, in different parts of Ranchi and Khunti districts.

Mahil (23° 01'56''N, 85° 15'21''E; 23° 02'25''N, 85° 15'48''E): The site of Mahil is in the outskirts of Mahil village, approx. 150 meters away, left to the Gajgaon- Mahil road. One large grinding cupule carved on the granite out crop, surrounded by 6 small cup marks. Another locality of out crop indicates series of cup marks in linear pattern along with few grinding holes, used for husking grains. Apart from this, evidence of few grinding holes was also observed which were made recently by the villagers, using iron implements (**Figure 6**).

Kachabari (23° 12'38''N, 85° 10' 43''E): Kachabari is a village located in Lodhma block of Khunti district. The cup marks were found over a long rectangular stone block, a part of the granite outcrop. Ten cup marks bears over it in bilinear pattern, resembling the ancient game boards recovered from several megalithic sites in Jharkhand (Das 2016: 2- 15). Other archaeological evidence in vicinity of the site is evidence of microliths, made on quartz and chert, and a single standing menhir at 90°, near the outcrop.



Figure 9: a. Granite out crop near Karra village, Khunti district, b. Evidence of ancient game board, c. Old and new game board carved by the children and evidence of recent use of marble used in game

Kumharia (23° 29'44"N, 85° 21'19"E): Cluster of 11 cup marks over a quartz outcrop are found in the vicinity of Kumharia village, in Burmu Block of Ranchi district. It was observed that, to prepare a suitable surface, the rock was continuously worked for long span of time to get a polished surface and then the cup marks were made over it. The villagers perform a sort of rituals to invoke the ancestors during religious festivals. The cup marks are considered as a symbol of fertility by the village inhabitants (**Figure 7**).

Burhu Berhamtpur (23° 29'42"N; 84° 44'21"E): Cup marks were found over granite outcrop approx. 50 meters left on Lohardaga- Ranchi road, adjacent to the *Sarna Sthal* (religious landscape of the tribes in the region having sacred grooves) at Burhu Berhamtpur village in Kudu block of Lohardaga. Two group of cup marks in single row were found in seems to have some sort of ritualistic significance for their authors. Few other isolated cup marks were found over the surface (**Figure 8**). Villagers assign them as a symbol of fertility.



Figure 10. *Bhim Gupha* in Chatra district with evidence of a pair of cupules (inset)

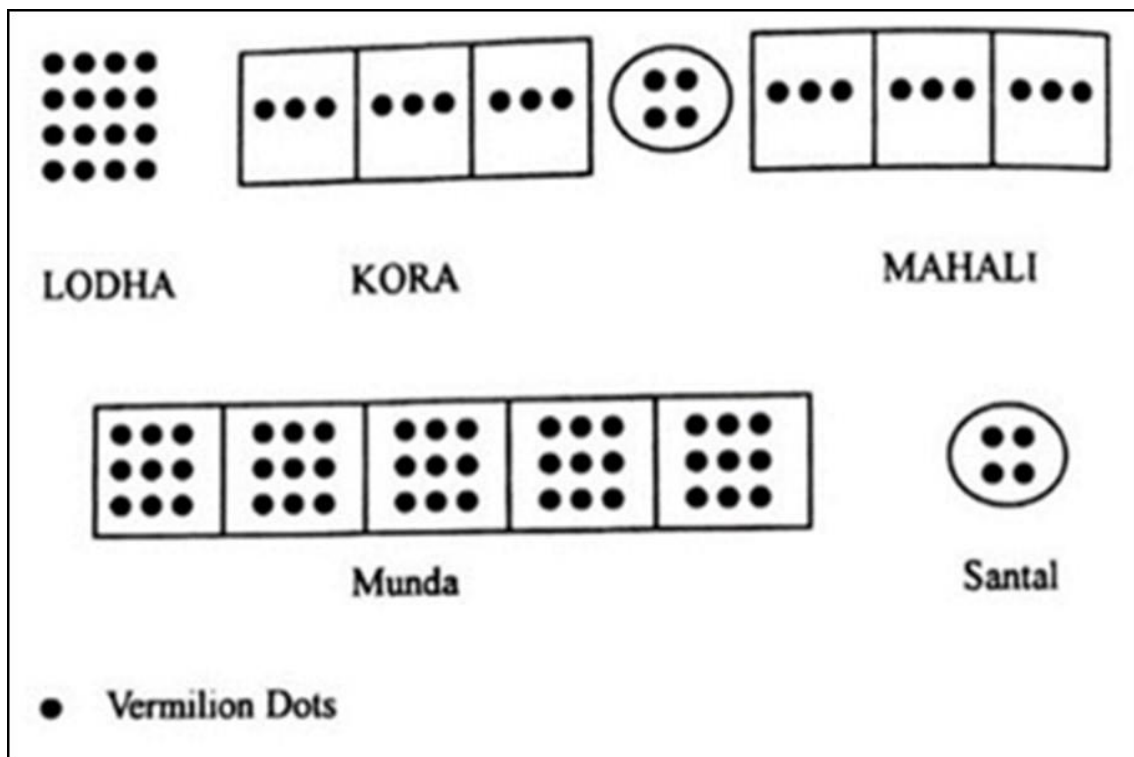


Figure 11: Diagram of different *Khanrh* of various tribes in the region (Debnath 2003)

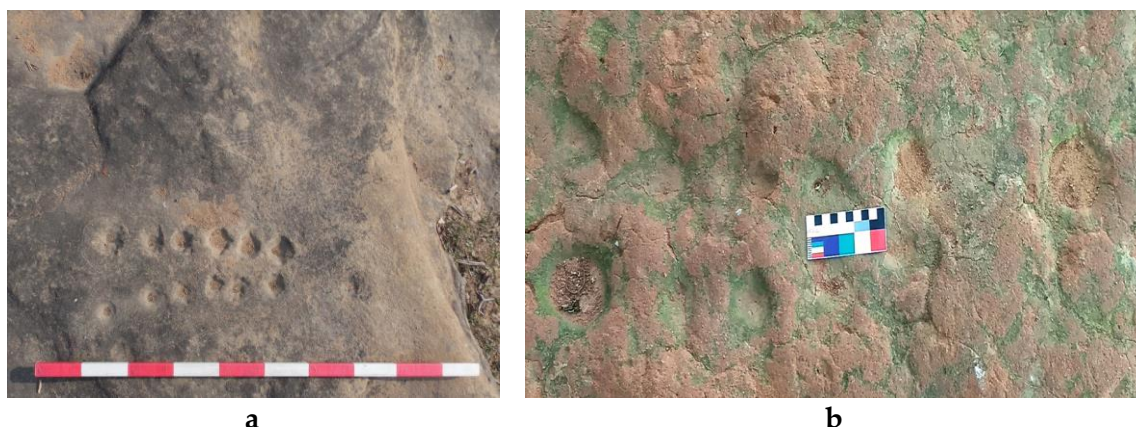


Figure 12: a. Evidence of recently made cupmarks by children in study area over stone surface and, b. compact surface of mud

Karra (23° 08'08"N; 85° 07'49"E): The site of Karra is located before Karra railway station, adjacent to the right side of Ranchi- Karra road in Khunti district. Cup marks are bear over the granite outcrop in irregular pattern as well as game board pattern. The total number of sets of game board is seven of two parallel rows of cup marks. There is evidence of several tiny stones near the game boards, recently accumulated by the children to play the game (**Figure 9**).

Caves and Rock Shelters

Bhingupha (24° 10'00"N, 84° 56'02"E): Bhingupha is a cave site located near Nawada village of Simaria block in Chatra district, reported by Dr. Harendra Singha, from Ranchi University. The site has several faded paintings and also has evidence of continuity of rock painting by the local communities. A depression with evidence of mixing colour and a pair of cup marks and few others were observed over a granite rock as well inside the cave (**Figure 10**).

Banpur (23° 46'37"N, 84° 58'26"E): The site of Banpur is a rock art site in Satpahar mountain ranges of Tandwa reserve forest of Chatra district, discovered in year 2013-14 by the present author. The site has two shelters: Banpur I and Banpur II. On the floor of Banpur I, there are four cup marks in two pairs, perhaps bear by the authors of rock art (Shekhar and Kim 2014:302).

Sidpa I (23° 47'12"N, 84° 57'11"E): One of the three localities of Sidpa Rock art site yielded evidence of two grinding cupules on the flat sandstone surface, just outside the proximity of shelter. It seems to belong to later period, exactly resembles the grinding cupules of Buddhist rock cut caves. Evidence of such grinding cupules have been found by the author at the site of Sutyambe hills in Ranchi district in association with ceramics of red ware and carved rock cut bed over a granite surface.

Isco (23 48'21"N, 85 19'38"E): The rock shelter site of Isco in Rautparra reserve forest of Sati hills in Hazaribagh district gave an evidence of rock art in different panels of the shelter (Imam 1995; Chakraborty 1997). The site also has an evidence of cup marks

bears over the surface of sandstone, on the way to the shelter in very close proximity. Children of the village still plays a game, *til- goti*, by making cup marks in bilinear pattern over the stone surface (Shekhar 2020: 165).

Ethnographic Parallels and Ritual Practices

The tribals in the region, particularly; the Mundas and other Austro-Asiatic communities make such fire altars during different festive occasions on stone platforms for performance of religious rituals. The fire altars are locally known as *Khanrh* (Debnath 2003: 160). These platforms bear cupules and vermillion, rice, and turmeric are offered in these cupules (**Figure 11**). Evidence of such ritual can be observed over a slab at megalithic site of Murchu in Ranchi district, where, ancestors are invoked occasionally and at a recent event of *Sohrai* (agricultural festival), when the villagers offers mustard oil and seeds to some of the cup marks and offered twelve chicken on the name of their ancestors. Even during secondary funeral rite, such rituals are performed by the Mundas at few sites in Ranchi and Khunti regions, where several old capstones have cup marks, which were use as medium to invoke ancestral spirits, to participate in the ritual, and to accept the newly departed soul in their heavenly abode.

Apart from cup marks, grinding cupules have been found at granite and sandstone outcrops as well. They are also bear over Megalithic capstones at different sites of Ranchi and Khunti districts. These cupules are still regularly used for grinding the first crop of cultivation, which are later offered to the ancestors. The idea behind this votive deposition, it helps to raise the fertility of the crop by the gress of their ancestors. Apart from this, they are sometimes also used for funeral rituals, as traces of turmeric and mustard seeds were found inside them, which could have been used to grind inside to use in offerings. Besides all these, local children use the cup marks occurs in bilinear pattern for a game *til- goti* or *chalgoti* (**Figure 12**). Sometimes they make circular designs resembling these cupmarks over stone outcrops to play such games (Das 2016: 11).

Discussion and Conclusion

Over 200 years of research worldwide, emphases were given to understand the meaning of cupules or cup marks (Bednarik 2010: 67). On the basis of ethnographic study, some potential interpretations have been done by various scholars in varied geographical region, as use of cupules for cultic or magic rituals; as sacrificial alter, fertility ritual, snake symbolism, preparation of paints, pounding of pigments of mineral and plant substance, preparation of spices or food, as genealogical markers, record of stock animals, or record of oath concerning land ownership, receptacles of holy water, receptacles for offerings to deities and funeral rituals, depiction of stars or constellations, vulvae, use as mortars, lamps and game board, etc (Magni 1901; Egger 1948; Priuli 1983; Pohle 2000; Pozzy 2000; Cairns and Harney 2003; Rizzi 2007; Lombry 2008, cited in Bednarik 2010: 67- 73). Such observations are applied to specific cases, cultures and society. The observations made by aforementioned scholars have been made in different geographical horizons and on the basis of varied ethnographic enquiry.

As far as megalithic sites are concerned, there are different theories regarding cup marks over Megalithic slabs or capstones. Rivett Carnac quotes regarding such cup marks “may represent a system of writing or denote the age of the dead person or the number of his children, or the number of the enemies slain by the warrior....” (Rivett-Carnac 1879: 4). Walhouse suggested that these cup marks indicate parallel of Druidical religion and belief related to megalithic structures, identified them as “altars” on which they celebrate bloody rites. He further mentions that cup marks were made to use as channels to drain off the blood of victims (Walhouse 1878: 21). Ellis and Ballin mentions about the ritualistic significance of cup marked stones during Late Neolithic or Bronze Age in Scotland and Santos mentions that rituals were performed over cup-marked stone, resembles ‘Altars’ by the Iron age people in Portugal (Santos 1962, cited in Coimbra 2001: 2; Ellis and Ballin 2019).

Such aforementioned ritualistic views have a sort of ethnographic parallel in the study area, as the tribal inhabitants still make such sacrificial altars over a stone blocks to invoke the ancestral spirit. These circular depressions are filled with offerings of vermilion dots, mustard seeds and mustard oil and surrounded by rice powder. They are considered as a medium to call ancestors and used as receptacles for oil, country liquor, and other offerings, served to the ancestral deities. An archaeological parallel of such practice can be observed over the megalithic site of Pankhri Baruwadih in Hazaribagh region of North Jharkhand. Ethnographic survey suggested that such rituals are performed during placing the funeral urn under megaliths and different religious festivals to invoke the ancestral spirits. Besides, these cupules are also considered as fertility symbol, and used in ritual during funeral, so that, the soul can get a rebirth.

Ancient megalithic sites in the region have such cup marks and probably they were made as sacrificial altars. An evidence of patination over megalithic slab at Pankhri Baruwadih indicates traces of similar ritual performed. It indicates that, cup marks over megalithic slabs could have been a major role in such rituals during ancient time.

There are some ethnographic counterparts of cup marks in the region. Children play a game known as *till goti* by making such cup marks. The tradition of such games in Indian subcontinent can be seen in many temples and rock cut caves, such as temples of Mahabalipuram and Bhivkund caves of Tamilnadu and Vidarbha region of Maharashtra, respectively (observed by the author during visits to these sites in year 2014-15). Cup marks found in rock shelters and caves can be assigned to prehistoric times and can be related to the rituals concerned with fertility, but the purpose is still unclear. It can be possible that to get proper grip to break any fruit nuts, or to crush mineral for preparation of pigments such cup marks would have been made over the surface or floors of such sites.

The interpretations of these cup marks or cupules can vary in different zones, context and circumstances. Ethnographic observation made in this paper is based over the

tribal society and their belief and culture. Such observations can not allow investigators to generalise about depictions of cup marks and cupules in different archaeological contexts, but up to certain limit, helps to draw inferences regarding their utility in ancient past. Observations made by the author during field survey, have few universal parallels observed by different scholars worldwide, which indicate the universality of belief system in different societies related to the depictions of cup marks and their functions.

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