



KURSHIBURU: A ROCK ART SITE OF EASTERN INDIA

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Abstract - Kurshiburu: a rock art site of Eastern India

A large number of cupule marks are found on a big triangular shaped stone slab on top of a hillock known as Kursiburu. It is located near the village Patratuli, about 12 km east of Khunti township, Ranchi district in the state of Jharkhand in Eastern India at 83°24'EL and 23°05'NL. The site is on the eastern plateau area of Indian subcontinent. The entire region is undulating, intersected with numerous streams and rivers, forested, studded with low rocky hills (Monadnoks) and some isolated peaks of igneous origin. The cupule marked stone is associated with microliths and haematite nodules. The surface of the nodules showed marks of rubbing for colour. The assemblage is dated to late Pleistocene to early Holocene on the basis of geology. It appears that the cupules were connected with some fertility rites of the prehistoric times. The shape and size of the slab on which the cupules are engraved, nature of the cupules and above all location of the site suggest some kind of public ritual practice. The find has been compared against other similar findings in India and abroad. Methodology for the study of this rock art is followed after those of renowned scholars who have done similar work in rock art.

Riassunto - Kurshiburu: un sito di arte rupestre nell'India orientale

Sul poggio di Kursiburu, nei pressi del villaggio di Patratuli, a 12 km dalla città di Khunti (distretto di Ranchi, India Orientale) è stata individuata una grossa lastra di pietra di forma triangolare recante numerose coppelle. Il sito si trova nella zona orientale dell'altopiano del subcontinente indiano. La regione è boscosa, solcata da corsi d'acqua, costellata da colline rocciose (Monadnoks) e da alcuni picchi isolati di origine vulcanica. La roccia a coppelle è associata a microliti e noduli di ematite. La superficie dei noduli mostra lo sfregamento con materiale colorato. L'insieme è datato fra la fine del Pleistocene e l'inizio dell'Olocene. Sembra che le coppelle siano connesse ad alcuni riti di fertilità della preistoria. La forma e le dimensioni della lastra su cui sono incise le coppelle, la natura della coppelle e, soprattutto, la localizzazione del sito suggerire una pratica rituale pubblica. Il ritrovamento è stato confrontato con altri reperti simili in India e all'estero. Lo studio di questa stazione di arte rupestre si basa sulle metodologie di ricerca seguite da rinomati ricercatori del settore

Résumé - Kurshiburu : un site d'art rupestre d'Inde orientale

Un grand nombre de cupules a été découvert sur une grande dalle de pierre de forme triangulaire qui se trouve au sommet d'une butte appelée Kurshiburu. Elle se trouve à proximité du village de Patratuli, environ 12 km à l'est de Khunti, dans le district de Ranchi, État de Jharkhand, en Inde orientale, à 83°24' de longitude est et 23°5' de latitude nord. Le site se trouve sur le plateau oriental du sous-continent indien. Toute la région, que traversent de nombreux ruisseaux et rivières, est vallonnée, boisée, parsemée de petites collines rocheuses (Monadnoks) et de quelques pics isolés d'origine ignée. La pierre qui est marquée de cupules est associée à des microlithes et des nodules d'hématite. La surface des nodules présente des traces de frottement pour obtenir de la couleur. Les études géologiques font remonter l'assemblage à la fin du Pléistocène ou au début de l'Holocène. Il semble que les cupules avaient un lien avec certains rites de fertilité des époques préhistoriques. La forme et la taille de la dalle de pierre sur laquelle sont gravées les cupules, la nature des cupules et surtout la situation du site suggèrent une sorte de pratique rituelle publique. L'assemblage a été comparé à d'autres découvertes similaires d'Inde et d'ailleurs. La méthodologie utilisée pour étudier cet art rupestre s'inspire de celle de chercheurs de renom qui ont effectué un travail similaire dans le domaine de l'art rupestre.

INTRODUCTION

The present work is on a rock art site found in eastern India in the form of cupules on a triangular slab of rock (Figures 1 and 2). The earliest available evidence of this type of rock art in India came from the Acheulian stage of the Lower Paleolithic culture, dating to 400,000–200,000 years BP (Bednarik, 2004: 35). The appearance of art or artistic objects in human cultural history is an

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important feature of hominid cognitive development and an important step in visual communication (Anati, 2004, 2009). Production of various art forms is associated with some kinds of rituals. Recently two more hypotheses came up for explaining rock art and ritual practices in Australia. The first theory explains rock art as a form of communication which was used as an adaptive strategy during mediation of social relations through exchange of information (Ross and Davidson, 2006: 308–9). The second concept is known as intensification, where increase in the rock art sites and greater regional diversity in art form and style in the later Holocene period were attributed to the growing socio-cultural and technological complexity. Rappaport (1999: 26) developed the idea that ritual has a unique structure and is universal. Ross and Davidson (2006) specifically emphasised the importance of understanding the embodied canonical message of individual rock art motifs within a particular cultural convention.

The present study has two main objectives: first, reporting the discovery and systematic recording of a new cupule site in eastern India; and second, to find out the elements or forms of ritual connected with the rock art site. It attempts to understand the relations between the context and the structure of rock art assemblages and ritual pattern. This study makes an attempt to apply Ross and Davidson's model to an Indian rock art site. The only difference is that in Australia the number of rock art sites is higher. In the present context, this model will be tested on a single site. The large quantity of pigments, tools and engraved petroglyphic materials found at this site provides an ideal database for applying this model. This study attempts to find seven key features of Ross and Davidson's (2006) model. The features are invariance, repetition, specialised time, stylised behaviour or stylised form, performance, and participation and form, which can hold and transform a canonical message.

THE SITE

The rock art consisting of cupules is situated on top of a small hillock locally known as Kurshiburu. The hillock is situated about 12 km east of the town Khunti, about 37 km south of Ranchi, the capital of the state of Jharkhand, India. The site is on the Ranchi plateau, an extension of the Deccan plateau in eastern India. The plateau is formed of granite gneiss of Archaean origin. The average elevation of its upper part is 700 metres. The entire region is undulating, intersected by numerous streams and rivers, studded with low rocky hills and some isolated peaks of igneous origin. The cupule site is found on top of one such hill (Figure 3). The drainage pattern of this region is within the Subarnarekha system of eastern India. The region is covered by forests of dry deciduous type. The climate is cool and pleasant. The average rainfall is 1,608.3 mm per year. Lithic materials are found from quaternary alluvial deposits. Cultural materials date back to the Lower Paleolithic at its lower limit and ranges up to the microlithic cultural tradition. The Pleistocene stratigraphy of this region is understood from the naturally exposed sections of quaternary alluvium deposits. Munda, a Mundari-speaking tribal group, forms the major population group in the area.

THE ROCK ART

Kurshiburu in the Mundari language means 'chair-shaped hill'. It is a flat-topped granitic hillock, very common in this region, about 610 metres above mean sea level. The eastern part of this hillock is covered by shrubs and bushes. The western side is a rocky surface covered by lichen and grass. The cupules are engraved on a rock slab, measuring 12,650 sq cm, found on the western side on the hill top. The rock slab is situated about 17.67 metres east of the survey pillar erected by the Land and Revenue Department of the Government of India. The rock slab upon which the cupules are found is lying on the ground under the open sky. The outline of the slab is roughly shaped like an isosceles triangle, that is, it may be considered to be shaped like a vulva. Its greatest length (about 2.07 metres) east-west, and its greatest breadth (about 1.20 metres) is north-south. The average thickness of the slab is about 20 cm. Each arm of this isosceles triangle has been measured. The arm AB is 240 cm long and the measurements of the arms BC and CA are 110 cm and 200 cm respectively (Figure 4). The slab is granitic in nature, probably the Chotanagpur granitic gneiss of the Archaean period. When broken the inner surface of the rock appears grey in colour with some black speckles in it. The laboratory analysis of the rock reveals that it contains feldspar, potassium, aluminium and silica. However some quartz and water are also present. The black particles are mostly biotite or black mica.

The total number of cupules found on the slab is 129. Such a dense concentration of cupules safely indicates that they are human-made (Bednarik, 2008) All the cupules except one (cupule no. 86) are deeply weathered. Sign of percussion and surface bruising are not found. No cupule surface has



been microscopically studied. In most of the cases the weathering is so heavy that the outer rims of the cupules have become rounded. The entire rock slab is highly weathered. It suffers from exfoliation, fluctuating humidity and fungal growth, which accelerated the fall of large flakes from the slab. The surface of the rock slab became black because it was covered with lichen and fungi.

Most of the cupules are oriented in an east-west direction. Some cupules are arranged in multiple linear rows. A detailed study of the linear orientation pattern of the cupules reveals that 42 cupules are arranged in seven different rows. The orientation pattern is one of the most important features for identification of the cupules. Metric analyses were done on each of the cupules for understanding the size and shape of each individual one. The measurements have been taken following the standards set by the American Committee (1981). Recording was done following the method developed by Bednarik (2008). For understanding the shape of the cupules several measurements were taken and correlations were made. The maximum rim diameter ranges between 3.0 cm and 9.6 cm and the maximum depth of the cupules ranges from 0.3 cm to 2.4 cm. The average diameter of the cupules is 4.29 cm and the average depth of the cupules is 0.82 cm. The ratio between the maximum rim diameter and the maximum depth of the cupules provides an average value of 6.41. Its maximum range goes up to 16. This may be due to the fact that the cupule marks are heavily eroded. Only one cupule (no. 86) is relatively fresh and less weathered. The effects of vandalism on these cupules were searched for. A deep line measuring 47 cm in length and about 2 mm in depths is engraved through cupules nos. 2, 3, 4 and 5. It starts from the upper part of cupule no. 9 and continues up to the upper part of cupule no. 7.

ASSOCIATED FINDS

A large number of rolled haematite nodules were found lying near the cupule-marked rock slab (Figure 5). Evidence shows that those were hand-transported by the prehistoric people from the nearby river banks, where these occur in large quantities. The earliest evidence of the presence of haematite nodules with striation marks and probable use as crayons in India is reported from the Paleolithic site at Hunsgi, Karnataka (Paddayya, 1982). A number of other important painted rock art sites of India have yielded haematite and red ochre nodules. At these sites it is evident that the nodules were used as colour for paintings. Since in the present context no paintings have been found, the actual purpose of transporting these nodules is not clear. It may be assumed that these haematite nodules were used for some kind of ritual performed at the cupule site by the prehistoric people. Perhaps this was used to represent the colour of blood.

A total of 43 microlithic tools were found associated with the cupule-marked rock (Figure 6).

PROBABLE DATE

The associated materials were recovered from the surface, collected from the rock debris deposited within the cavities on the hill top. Since the activities of rain and small streams are less at the site, it may be assumed that not much of transport or displacement of materials has taken place. The deposit consists mainly of spherical quartz pebbles and grains. The matrix of the deposits is formed of kaolines, developed locally due to the decomposition of grasses and vegetation that are available in the vicinity.

No material is found from the site, which may give a chronometric date to the rock art under discussion. Within a 5 km radius of Kurshiburu two more microlithic sites have been found (Polley and Ray, 2010). At these sites microliths are coming from beds rich in ghuting, that is, calcrete or caliche mixed with small spherical quartz pebbles and lying in a bed of clay. In eastern India ghuting beds are dated to the terminal Pleistocene to early Holocene times (Ray and Chakrabarti, 2004). Although in India microliths can hardly be the index for dating rock art, their presence on the top of the hillock and in association with ghuting in the nearby sites of Kurshiburu may help us to assume that the age of the rock art site may be placed to the terminal Pleistocene to early Holocene times.

PERFORMANCE OF RITUALS

In Kurshiburu, the occurrence of 129 cupules on a vulva-shaped block of stone, in association with a large number of haematite nodules, and the invariance in the pattern of the cupules reflect their association with ritual performance. The presence of occupational debris and a large number of cupules along with their varying erosion patterns provide some indication that the rock art was practised in this region for a long time. The cupule is the only form of rock art at Kurshiburu. There

are several explanations given by scholars for making the cupules: the preparation of paints; unspecified or specified cultic or magic rituals; pounding of medicines (mineral or plant) and pigments or spices; the placement of offerings including human blood and semen; the depiction of star constellations; the map-like depiction of topographic elements of nearby landscapes; geophagy; board games; a symbolism that can no longer be recovered (Bednarik, 2008: 91). In every ritual certain acts or actions are repeatedly practised in an unmodified form over several generations and this is considered as a tool of learning or remembering the ritual performances for several generations by the people (Ross and Davidson, 2006:319).. Indian tribes often perform rituals and make paintings for a variety of purposes, namely, to preserve themselves against malevolent spirits, for peace, prosperity, health, fertility and to ward off diseases (Malla, 2004). Studies on tribes like the Saoras and Santhals of eastern India have shown that the paintings are associated with harvesting and with some magical practices (Malla, 2004: 298).

No direct evidence in terms of the time of ritual practice is found here. Also no evidence like grinding stones, which directly relate the ritual practice to the time of economic activities, was found. However, the occurrence of a number of haematite nodules and the cupules on a vulva-shaped rock slab indicate a probable association with some form of activities related to fertility rituals. No clear indication of the actual time of the ritual is found.

The site is situated on the top of a small hillock, a specialised place, and the repeated production of a motif on a single rock panel gives some indication of the significance of that motif (Ross and Davidson, 2006: 322). In India some of the rock shelters with paintings are regarded as sacred, magical and enchanted places. Rock art sites like Jhiri Nala, Bhimbetka, Kota Kerar, Gufa Maser and the rock art sites of the Panchmarhi area are still worshipped by local tribal people (Malla, 2004: 302). No proper explanation about the ritual significance of these cupules of Kurshiburu is available to the local Munda people. With the influence of Christianity and Hinduism local tribes have perhaps lost track of traditional practices and beliefs.

The cupules are considered as the simplest form of the representation of the vagina; for that reason one of the well accepted reasons for making cupules is the practice of cultic rituals or magic (Bednarik, 2008: 91). The practice was probably for delivering some form of information to a selected audience.

The location of the cupules indicates that the ritual (if any) probably was practised publicly, not in any secret place. It is quite difficult to determine the number of individuals present during the rock carving. It is also not easy to find out what other roles were played by such individuals besides carving the cupules. All aspects of the morphology, the topographic location of rock art sites, the art complex and huge collection of haematitic nodules, denote the presence and participation of a good number of people at the place. The possibility of transforming canonical messages increases with this feature.

CONCLUSION

The occurrence of cupules in association with microlithic tools and haematitic nodules is not new in India. So far such occurrences are mostly recorded from central India, especially from the Vindhya and Kaimur hill ranges. However, the evidence of cupule sites is increasingly found in different parts of eastern India. In this context some of the sites like Vikramkhol, Ulapgarh Ushakuthi of Jharsugda district, Chormoda and Baurikupa of the Sundergarh district in Orissa, eastern India (Pradhan, 2001) are worth mentioning. This article deals with the issue of the discovery of a new cupule site in Kurshiburu. It also attempts to understand the context and structure of rock art assemblages and through this it analyses Ross and Davidson's (2006) model of an Indian rock art site. Kurshiburu cupules are similar to Chormoda, where the highest concentration to date of 826 cupules has been recorded, but at this site cupules were found on a vertical rock panel inside a rock shelter (Pradhan, 2001). A number of features came up, which directly indicate that Kurshiburu could have been a specialised place for making rock art. The features are: first, the presence of the cupule on an open space on top of the hillock; second, the presence of a particular motif pattern on a rock slab; and third, the repetition of this particular motif pattern. From the study of the beliefs and ritual practices of present-day Indian tribes and indigenous populations it has been found that a number of rock shelters with paintings are regarded as sacred, magical and enchanted places. The combinations of these data help us to identify Kurshiburu as a specialised place for making rock art and performing some ritual. In another sense it points out formalised and stylised behaviour at the place. The location of the rock art site, topographic features and associated objects clearly denotes that the rock art on the Kurshiburu hillock was made publicly and probably it involved the partici-

pation of a good number of individuals. Features like the degree of invariance, repetition of motifs, specialised place and evidence of participation indicate that the cupules of Kurshiburu include a system of symbols, which were transferred to the people who practised or made it.

The present study with all its limitations is an attempt to study a rock art and information associated with ritual. This is done only with the evidence available related to rock art assemblages and without application of ethnographic data. However, a number of factors like taphonomic processes that are associated with rock art and its associated assemblages can hide or even alter the data present in a rock art site, but still it is always useful in the sites where no direct ethnographic information is present. On this lies the usefulness of the application of this kind of method of analysis.

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Map of the state Jharkhand, showing the location of Kurshiburu (not to scale) (Polley et al).

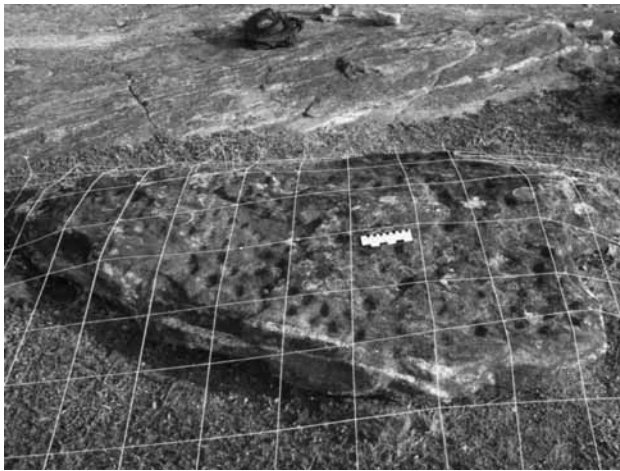


Fig. 1: Cupule bearing rock slab of Kurshiburu ((Polley et al).

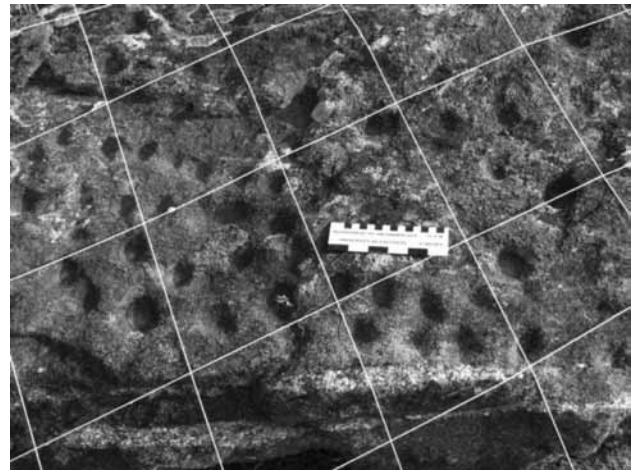


Fig. 2 Rock slab showing cupules on it. (Polley et al).

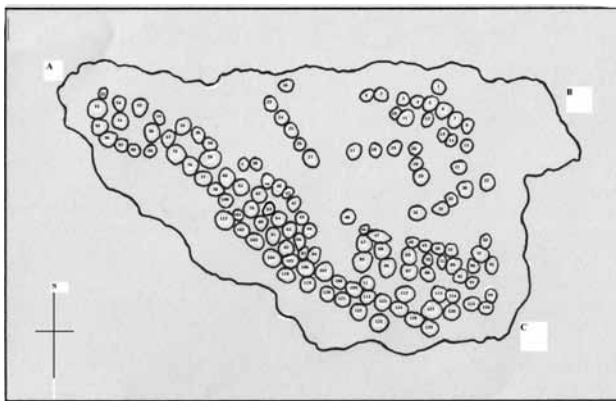


Fig. 3. Number and Orientation of the Cupules on the Rock Slab (Not to Scale) (Polley et al).



Fig. 4 Landscape of the Khunti region. (Polley et al).

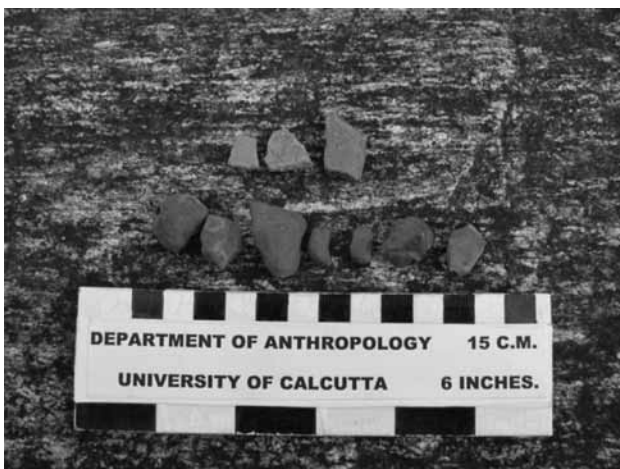


Fig. 5. Pot fragments and haematite nodules found from Kurshiburu (Polley et al).

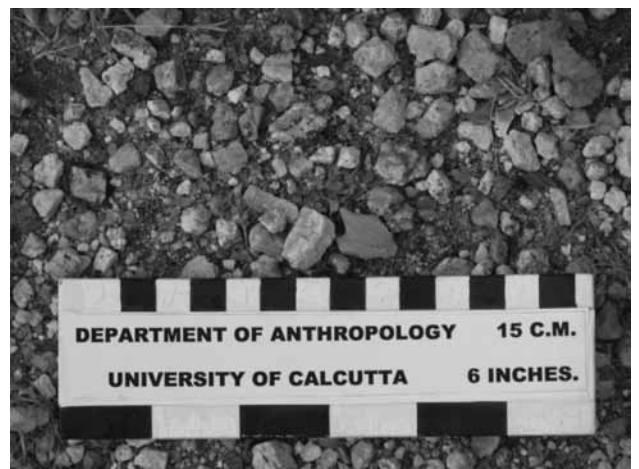


Fig. 6. Microliths found with quartz nodules. (Polley et al).