

Cup Marks in the Capstones of Palipbothana Mortuary Complex

*Nadeera Harshajith Dissanayake, Thilanka Manoj Siriwardana, Indika Ruwan Jayasekara
and D. Thusitha Mendis*

Introduction

Several shallow pits on the surfaces of some capstones in the Palipbothana burial complex were noticed during the exploration done in 2020 by the present authors. These were identical with the cup-marks reported from the other regions of the world associating with different contexts. Further evidence of the use of the cup marks was revealed through the excavations done in the burial complex. The results of the findings will discuss in the present chapter. As this will be the first known report of cup marks from Megalithic burials in Sri Lanka, the study will attempt to describe the findings and maintain open conclusions.

In 1993, Robert G. Bednarik introduced the word *cupule* to archaeology, as an umbrella term for different structures with the hollows in the rocks known as ‘pits’, ‘pit marks’, ‘hollows’, ‘cups’, ‘cup marks’, ‘simple cups’, ‘pitted rocks’, ‘dots’ and potholes. Generically, the term *cupule* refers to a small, cup-shaped feature and the word derives from Late Latin *cūpula*, ‘little cask’ (Bednarik, 2018). The present work will use the term *cup marks* for the identified feature which is commonly referring in the literature.

Cupmarks reported from every continent except Antarctica (Bednarik, 2018). They are chronologically spanning from the lower Paleolithic period to Holocene period (Banarjee, 2016) and are largely reported from the Neolithic, bronze and Iron Age sites. Even some has been reported from the 20th century (Bednarik, 2018). Circular shape is common, but triangular and elliptical forms were also reported (Kumar and Krishna2014). Cup marks were reported from cave floors and walls, megalithic funerary constructions, and some isolated rocks (Das, 2016).

Researchers over two centuries attempted to define the usage of cup marks. Some scholars saw these as works of art, but this notion is not entirely accepted (Rosenfeld, 1999). The usage might be spanning from ritualistic purposes to artistic (Banarjee, 2016). According to Bednarik there are more than 71 hypotheses forwarded to interpret the function of the cup marks (Bednarik, 2010). The cup marks in each cultural context might played a distinct role identical to that cultural tradition (Aswani and Kumar,2018). Therefore, the meaning of the cup marks is still not fully deciphered. Is it was only an index of human

perception? Is it indicating a representation beyond an artistic value? There are many questions to be answered in this regard.

The Cupules in the Indian Peninsular

Significantly, cupules are identified from the megalithic contexts in China, Europe and Asia around the world. These contain different depths at a diameter of 1-7 inches range. There are single cup marks as well as cluster forms in 20-25 and some cases exceeding hundreds. The oldest cupmarks in the Indian context revealed from the auditorium Cave at Bhimbetka (Bednarik, 2001) dated to .29000 years BP Similar features reported from the Sohanpura, Kalabhata, Banedi, Kalapahad, and Khola (Sharma, 1997), Chattaneshwar, Kanyadeh, Hathikheda, Mahadev Bhata, Moda Bhata, Morajhari, Bajnibhata, Darki Chattan (Kumar et al., 2005).

The cupmarks of the megalithic culture in India were studied for more than two centuries. The first British researchers reports were limited to denote the resemblance between the Indian and European Megalithic funerary complexes. In 1878, Walhouse reported four diagonally marked cupulus in a capstone at the Pallicondah site near Vellore, Tamil Nadu (Thakur, 2004). Walhouse also made remarks about the Druidical (early Celtic religion) beliefs related to megalithic structures identifying with ‘altars’ on which they celebrated blood rituals, and the cup marks were channels to drain off the blood of victims.’ In 1879 Rivett-Carnac recorded cupules at Junapani in Nagpur district (Abbas, 2014).

Some Indian researchers as Paddayya, Mahadevan, Kosambi, and Rao also pioneered to report cup marks in the sites as Rajasthan, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala in India and presented different views. Kosambi emphasised the depth and the full or half polished surface of the cupmarks indicating the laborious effort of the finishing (Kosambi, 1964). Paddayya described that “*these marks cannot be invested with any functional uniformity; rather they serve a variety of functions – rain- making merrymaking, warding off evil spirits, fertility rites, communication with spirits, harvest ceremonies etc.*” (Thakur, 2004). Rivett Carnac believed the number of cupules portray the age of the deceased, number of children or number of enemies killed by him (Rivett, 1879). Some scholars described the location of proto-historic megalithic burial sites, orientation and establishing cupules affected by the seasonal changes, location of the celestial bodies (Banarjee, 2016; Aswani, and Kumar, 2018; Vahia, et al., 2020, Siriwardana et al., this volume). As mentioned by K.P. Rao, the cupules yielded at Mudummala Menhir site

resemble with the Ursa Major constellation pattern (Rao, 2015). In Indian astronomy, this constellation pattern known as '*Saptarshi Mandala*' (Thakur, 2004) used to identify the pole star by the ancient people, caravan drivers and sailors (Aswani and Kumar, 2018).

Similarly, the cupules would be a part of the pre-burial rite as the date or month of establishing the basic stone of the burial or the date or month of burying the dead body (Abbas, 2014). Indeedly, the cup marks should have a directly connection with the burial rites of the megalithic contexts. Therefore the process of the cupules should be understand through studying the respective fields in a spatial background (Arjun, n.d.).

Palipbothana Excavation and Research History

Archaeological evidence in Sri Lanka have revealed about two main funerary traditions since 2000 BCE. i.e. clay chambered burials and megalithic burial tradition (Senavirathna, 1989; Somadeva, 2010; Dissanayake, 2018). The radiocarbon dates yielded from recent studies shows the use of megalithic burials existed from 8th century BC (Mendis, 2017) to 4th century AD in Sri Lanka (Dissanayake, 2018). The Megalithic burials are mostly reporting from the Dry Zone of the island, and higher density has been reported from the upper Yan Oya, Malwatu Oya, Kala Oya and Mee Oya basins. The Megalithic burials located in these basins were studied by Raja De Silva (1987), Sudarshan Senevirathne (1989), Priyantha Karunarathne (1994), D. K. Jayarathne (2017), Ranjith Bandara Dissanayake (2018) and Thusitha Mendis (2017) and reported the variants such as Cist burials, Alignments, Cairn circles, Cairn heaps and Urn burials.

The Palipbothana Megalithic burial site (8.522350° north latitudes and 80.667340° east longitudes) located in Ratmalgahawewa Palipbothana Grama Niladhari Division of Kahatagasdigiliya Provincial Secretariat Division in Anuradhapura district of North Central province. Geographically it is located in Upper Malwatu Oya and Upper Ma Oya Basins, recording the absolute location as. Due to the natural and human activities the site was in rapidly endangered level and the Department of Archaeology and Heritage Management of Rajarata University of Sri Lanka explored and recorded the site during the first quarter of 2020, which was not previously recorded. The site can be identified as a multi-traditional burial site where as 80 burials expanded in an area of 20000m² (Mendis, et al., 2020).

The cupmarks in the Palipbothana Burial Site

The spatial distribution of the Palipbothana Burial manifests four burial clusters. It was able to identify the cupmarks in two cap stones of huge cist burials in two separate clusters. The burial no. 27 at the western cluster and the burial no. 12 at the eastern cluster contains the cup marks. The cup marks in these two burials will be first such report in Sri Lanka from the Megalithic constructions. The pattern of the distribution and the spatial relationship of the marks with the physical environment will be examined. A connection between the marks in the capstone and the associated artefacts in the archaeological deposit will be examined below.

Methodology

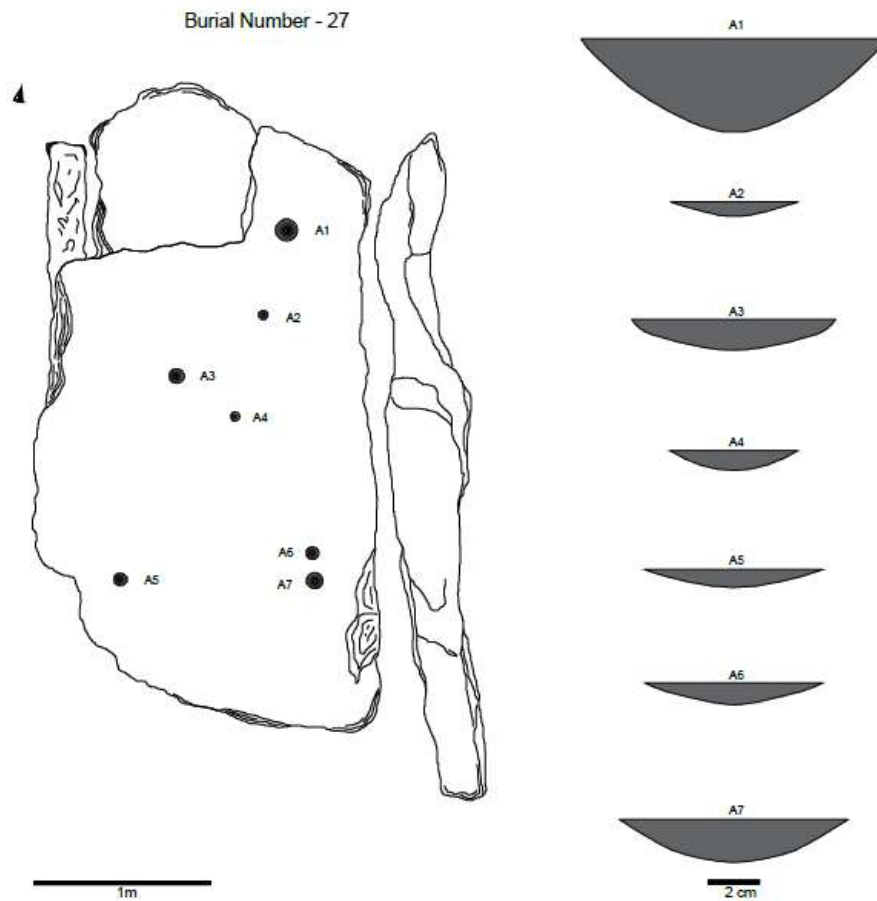
The physical features as size, angles and orientation of the cupmarks were recorded with much attention. The length, diameter at the edge of the cupmark, and the depth of the dip measured. Further, a mold of each mark was taken by using plaster of Paris. The cupmark was covered by a thin polythene and mixture poured into it. The surface was flattened to the level of the slab surface.

Burial no. 27

The largest burial (348 × 190 cm) in Palipbothana burial site and established its orthostats from north at 15° orientation to north-west. The fractures in the capstone could be occurred naturally. Seven cupmarks identified from the burial capstone. Significantly, the line which joins the cupmarks of A1, A2, A3 and the line joins A4, A5 oriented to the magnetic north.

	Length (cm)	Breadth (cm)	Depth (cm)
A1	12	12	3.7
A2	5	5	0.6
A3	5	5	1.2
A4	5	5	0.8
A5	8	8	0.7
A6	7	7	0.9
A7	7	7	1.7

Table 9-1 Details of the cup marks of burial no 27



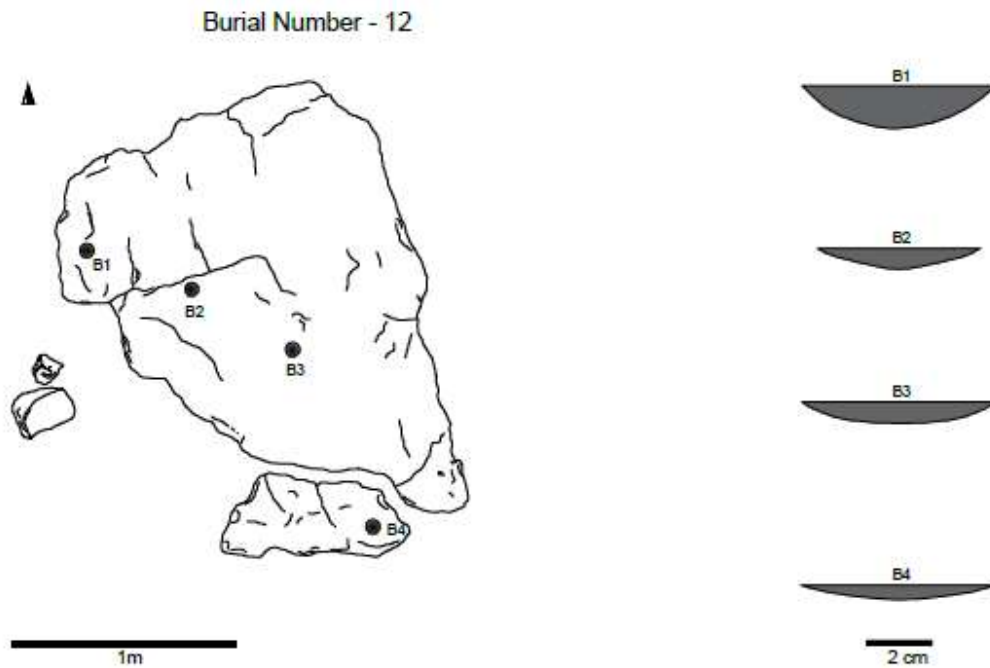
Plan 9-1 Positioning of the cup marks carved on the capston of burial no 27

Burial no. 12

The burial was located at the eastern cluster, and its orthostats were discovered from north at 8° orientation to north-west. Only the cap stone of the burial was visible during the exploration and later an excavation was conducted in the last quarter of 2020. The burial was identified as a cist burial of 160 cm x 75cm. Four cupmarks were revealed from the capstone of the burial. B1, B2 and B3 marks lay in a line at 70° orientation to north-west from north while B4 and B3 located at 28° orientation to north-west from north.

	Length (cm)	Breadth (cm)	Depth (cm)
B1	6	6	1.3
B2	5	5	0.6
B3	6	6	0.7
B4	6	6	0.4

Table 9-2 Details of the cup marks of burial no12



Plan 9-2 Positioning of the cup marks carved on the capston of burial no 12

Discussion

Most surviving rock art provides little information about the way it appeared to its makers, because much or most of the empirical information that would be required to experience the ‘living system’ is no longer recoverable, having fallen victim to reduction processes of various types (Bednarik, 2010). As questioned by Bednarik, the forms of these works are remains. However, it is hard to interpret the various functions occurred over thousands of generations. Modern researchers have to view the cup marks and its associated background to get close to these functions. We should not ignore that most of the symbolic behaviours had been forgotten, materials perished, and evidence was unnoticed.

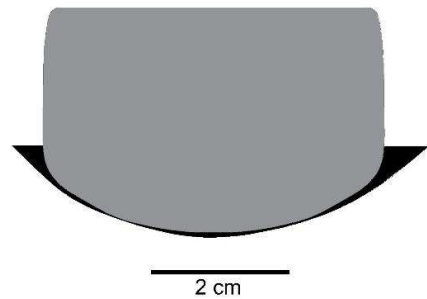
Communicating with the ancient artists through these remains is a challenging, but an important task.

The cupmarks were not subjected to proper attention in Sri Lankan archaeology due to lack of evidence. A recent discovery of dotted marks from a prehistoric context at Hunugalagala cave in lowland wet zone hypothesized 6000 years BP interpreted as symbolising the Orion constellation discovered (Somadeva, 2016). Somadeva reporting another similar finding from the Bādāhenagalge pre-historic cave at Opanayake (Pers. comm. Somadeva, 2020). . Though there are continuous records and similarities of the cup marks reported from prehistoric period to protohistoric period in India showing a the socio-cultural evolutionary features of the Neolithic age and Megalithic tradition (Thakur, 2004) it is too early to draw such connections in the Sri Lankan context. However, it is apparent the cup marks are associating a function linked with funerary rites. We should consider several questions such as 1. What is the conceptual framework of creating cupmarks? 2. What is the meaning of their spatial orientation? 3. What is the relationship between the cupmarks and the funerary remains? And what was the contemporary socio-cultural environment was associated with the creators of these cup marks? when studying these cup marks.

It is hard to answer these questions from the few cup marks found from Palipbothana. Though it can compare with the finding from other megalithic burials beyond Sri Lanka by considering the similarities of the form, it is hard to assume the function was similar. Therefore, further research required to build a conceptual framework of the use of cupmarks in Sri Lanka



Figure 9-1 Ex 1 -16 Pot

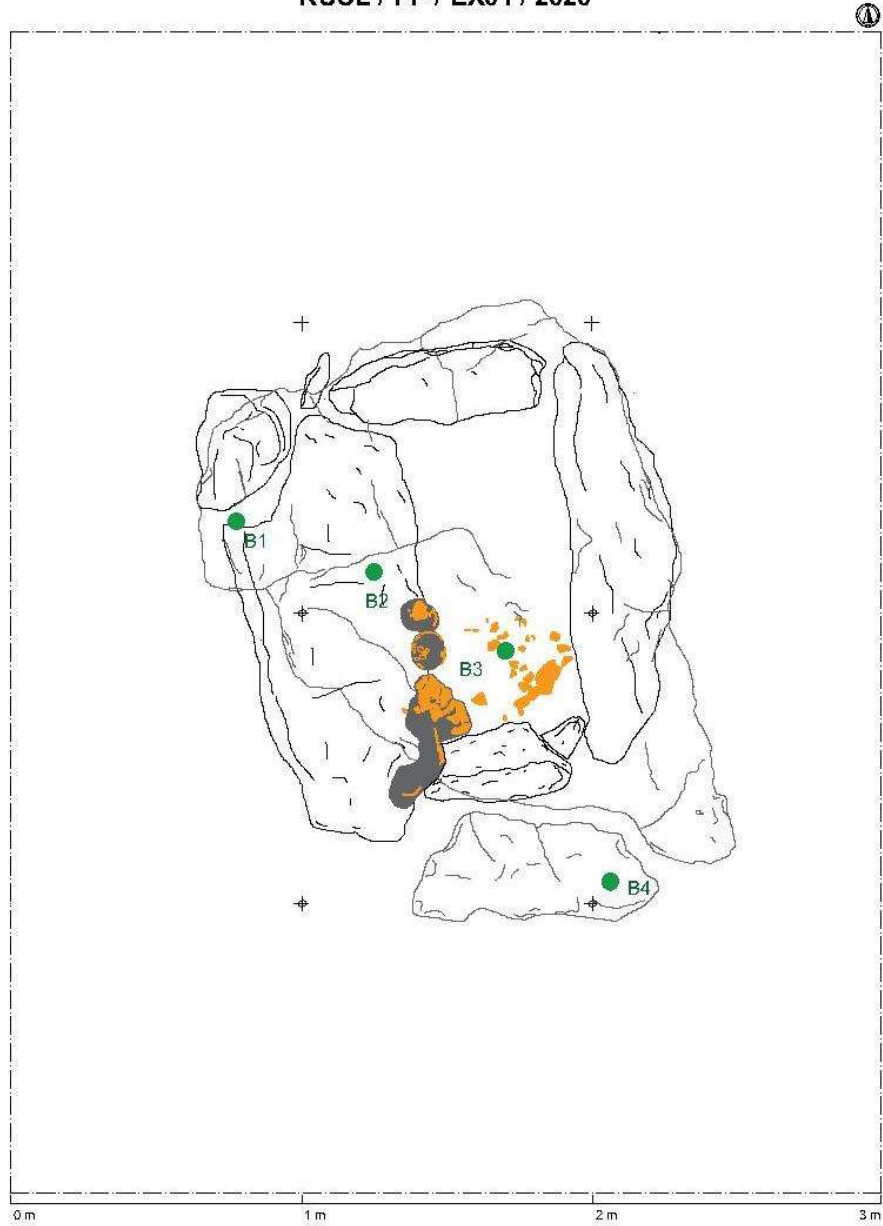


Plan 9-3 Ex 1 -16 Pot

The cup marks found from the present study indicates they have a practical use rather than marking a symbolic pattern. The morphology suits to place an object with a globular base or pour a liquid substance into it. Small pottery was recovered from the outside of the southeast of the RUSL/PP/EX1/2020 excavation in the present study (refer to the excavations results in chapter for further details). The base is perfectly matching with the B1 cup mark (Figure 9-1, Plan 9-3). This wares, which are associated with cupules, can be hypothesized as the ones used for the rituals. It can be imagined that these were related to post ritual burial activities as they were found outside of the burial. It is a tradition even at present making offerings to the deceased as a funeral rite. According to ethnoarchaeological studies, the living Megalithic traditions at *Gotamala in India reports offering of alcoholic substances to the deceased*. The *Gadaba* community offer food and *Bondo* community offer animal blood over Menhir (Mendaly, 2017). It can assume such megalithic burial rituals might existed during the early periods of the practice. Especially, offering blood may symbolize the eternal living in the rituals (Aswani and Kumar, 2018).

Small potteries similar to the above finding reported from the other Megalithic burials in Sri Lanka and the forms indicate they were used for ritualistic purposes. These small vessels might be filled with a liquid or a solid as a part of the rituals, and then might deposited along with the skeletal remains of the deceased. Though we still do not have any direct archaeological evidence of the nature of the contents in the vessels, and the literature provides us some clues. The Upanishads as Kaushitaki, Pranagnihotra, Chandogya mentioned the funeral rituals and offerings such as water and Soma during such events. Further, the early Buddhist rituals may link with these cupmarks, due to the large Buddhist community living in the early historic period as evidenced by the number of early Brahmic inscriptions. The main urn in the burial of the RUSL/PP/EX1/2020 excavation placed perpendicular to the B2 cup mark, may represent a ritualistic practice (Plan 9-4). These have to examine through the other burial complexes and it will need to analyse the trace elements in these potteries for a better conclusion. The requirement of doing repeated funerary offering or rituals may has a conceptual link with the pattern of the cupmark orientations. It is apparent these marks used for an unknown ritual, but it is hard to explain any cosmological connections with these marks. As mentioned earlier, the Indian researchers connects the cupmarks with cosmology. We are not eager to draw firm conclusions from the present findings, and it will need need further studies. Therefore, future researchers must consider these possibilities and gather data which might have unnoticed hitherto. .

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Date : 2020.11.02

Drawn by : Nadeera Harshajith

Key



Cap stone



Side stone



Pottery cluster



Cup Marks

Plan 9-4 RUSL PP EX 01 2020

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