

Beyond the cup: an integrated archaeological and ethnographic study of persistent ritual landscapes at Devidhar, Kumaon Himalaya

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Abstract

This paper presents an interdisciplinary investigation of a cluster of prehistoric cup marks at Devidhar, near Lohaghat in Champawat district, Uttarakhand, arguing for their interpretation as a persistent sacred landscape. Moving beyond typological description, the study adopts a contextual archaeology approach, integrating high-resolution archaeological documentation with deep ethnographic engagement in order to explore the long-term biography of the site. Cup marks are a global phenomenon that scholars often relegate to the nebulous category of ‘ritual’, yet this study demonstrates their continuous, dynamic role in the cultural memory and active religious practice of the Kumaoni community. The study documents eleven cup marks, noting their atypical size and their alignment along the route of the annual Maa Bhagwati Dola Yatra. Ethnographic interviews and participant observation recover the associated oral tradition, in which devotees interpret these petroglyphs as the mortar, or *okhli*, of the goddess, directly linking them to a major regional festival and to the cosmic myth of the *Samudra Manthan* (the churning of the ocean). This synchronic analysis sits within a diachronic review of cup marks across the western Himalayan region. The Devidhar site, it is argued, exemplifies a palimpsest of meaning, in which prehistoric symbolic gestures have been seamlessly incorporated into later and contemporary Hindu ritual geography. The findings challenge passive notions of rock art as a static relic and emphasise the critical importance of integrating indigenous knowledge systems into archaeological interpretation. The paper concludes with a call for urgent, community-involved conservation strategies to protect these vulnerable nodes of tangible and intangible heritage.

Keywords: *persistent landscape; cup marks; rock art; Kumaon Himalaya; ethnohistory; ritual geography; cultural palimpsest; archaeological ethnography; intangible heritage; community archaeology.*

1. The problem of meaning in non-figurative rock art

The interpretation of non-figurative petroglyphs, and simple cup marks in particular, remains a perennial challenge in global archaeology. Scholars often describe cup marks as the most ubiquitous and least understood form of rock art,¹ yet secondary literature frequently attributes to them only generic ritual or astronomical functions. In South Asia, and in the Himalayan region specifically, scholarship has focused largely on typology and spatial distribution,²

¹Robert G. Bednarik, 'Cupules', *Rock Art Research*, 25/1 (2008), 61–100.

²Yashodhar Mathpal, *Rock Art in Kumaon Himalaya* (New Delhi, 1995).

and systematic attempts to understand the meaning of these marks within their living cultural landscapes remain comparatively rare.³ This study shifts the interpretive paradigm from a static, typological analysis to a dynamic, landscape-based investigation.

The present investigation centres upon a cluster of unusually large cup marks located at Devidhar, near Lohaghat, in Champawat district, Uttarakhand. These marks appear on two prominent schist slabs situated some hundred metres from the Maa Bhagwati Temple, occupying a significant position along a traditional movement route that devotees from neighbouring villages use. Preliminary observation indicates that their size, visibility, and spatial arrangement distinguish them from comparable cup marks documented elsewhere in the central Himalayas.

This research addresses a critical lacuna in the existing literature: the integration of deep-time archaeological data with the ethnographic present, in order to understand how prehistoric symbols are curated, reinterpreted, and put to active use across millennia.⁴ The central argument advanced here holds that the Devidhar cup marks represent neither mere utilitarian features nor random survivals from antiquity, but rather physical materialisations of ritual activity that have created and perpetuated sacred space within the Himalayan landscape.

This paper demonstrates the importance of region-specific and site-sensitive study for enriching our understanding of India's archaeological diversity. The Devidhar site shows that even modest or visually unassuming cup marks acquire profound significance when studied through an interdisciplinary and contextually sensitive approach, one that attends carefully to the physical environment, the ritual geography, and the living memory of Himalayan communities.

2. Cup marks from global to regional contexts

2.1 Global perspectives

Cup marks, or cupules, are among the oldest and most widely distributed forms of rock art; scholars recognise them from the Lower Palaeolithic onward across five continents.⁵ Interpretative frameworks span a broad spectrum, from the practical, such as grinding hollows, nut-cracking surfaces, or water-collection features, to the symbolic, encompassing fertility symbols, stellar maps, and portals to subterranean or supernatural realms. The 'ritual' explanation has frequently served as a default attribution, a tendency that highlights the need for rigorous contextual specificity in each regional study.⁶ This paper takes that methodological imperative seriously by situating its interpretive claims within the specific material and cultural context of the Kumaon Himalaya.

2.2 The Himalayan and South Asian context

Within the Indian subcontinent, scholars frequently associate cup marks with megalithic cultures and early historic periods. In Uttarakhand, significant documented sites include Dwarahat, in Almora district, where researchers have recorded over two hundred examples, and Naulagaon, in Champawat district, where cup marks appear on a menhir within an evident ritual complex.⁷ Previous scholarship has catalogued these marks and noted their distribution but has seldom engaged with their potential continuity within local cosmologies and living religious traditions.

³M. D. Pathak and Jean Clottes, 'Cup marks in Central India', *Adoranten*, 54 (2019), 23–34.

⁴Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (London, 2000).

⁵Bednarik, 'Cupules'.

⁶Paul S. C. Tacon, 'Rainbow colour and power among the Waanyi of Northwest Queensland', *Cambridge Archaeological Journal*, 18/2 (2008), 163–176.

⁷Inder Lal Verma, *Janpad Champawat ke Darshaniya Sthal [Notable Sites of Champawat District]* (Dehradun, 2014).

This study builds on the foundational work of Mathpal and others by applying a landscape phenomenology approach to the Kumaon region.⁸ Rather than treating cup marks as inert archaeological evidence, the present analysis regards them as persistent features within a ritual topography that continues to be inhabited, narrated, and used. This reorientation, from description to interpretation and from form to meaning, constitutes the principal methodological contribution of the study.

3. Theoretical framework and methodology

3.1 Theoretical framework

This study sits at the intersection of three theoretical orientations. First, landscape archaeology treats the cup marks not as isolated artefacts but as integral components of a ritual topography; following Ingold's concept of dwelling, the landscape is understood here as a lived environment that human bodies and cultural practices constitute through their engagement over time.⁹

Second, historical duration, or *la longue durée* (the long term), draws inspiration from the Annales School's concept of extended historical duration; this approach examines how sacred landscapes maintain their significance through multiple cycles of cultural change, with prehistoric features enduring by being progressively re-coded within successive symbolic systems.

Third, archaeological ethnography, following scholars such as Chip Colwell, does not treat the narratives and practices of contemporary local communities as distortions of an authentic prehistoric reality. Instead, it treats them as an additional, valuable layer of interpretation. As Colwell has argued, community experience and oral tradition enrich, rather than contaminate, archaeological understanding.¹⁰

3.2 Methodology

The study employed a mixed-methods approach, combining three complementary strands of inquiry.

Archaeological documentation: repeated site visits provided the primary data. The study recorded each of the eleven cup marks using photogrammetry, generating three-dimensional models that permitted precise measurement of depth, diameter, volume, and wear pattern. The analysis assessed the spatial arrangement of the cup marks in relation to slope, orientation, and rock-surface accessibility, and a total station mapped the precise spatial relationships among the individual marks, the Maa Bhagwati Temple, and the Dola Yatra processional route.

Ethnographic fieldwork: the study drew on semi-structured interviews with fifteen key informants, including temple priests, or *pujaris*, village elders, and regular participants in the Dola Yatra. The author recorded oral histories concerning the origin and meaning of the marks and subjected them to thematic analysis. Given the sacred character of the site, fieldwork proceeded with scrupulous attention to local sensitivities: the author extracted no physical samples, and photographic and documentary records followed the wishes of the community throughout.

Comparative analysis: the study compared morphometric and morphological data from Devidhar against published datasets from Dwarahat, other Himalayan sites, and select locations in central and peninsular India, in order to identify regional patterning. The comparison focused on variables including size, topographic position, associated features, and the interpretive frameworks that previous researchers have applied to comparable sites. This

⁸Mathpal, Rock Art in Kumaon Himalaya.

⁹Ingold, Perception of the Environment.

¹⁰Chip Colwell, 'Collaborative archaeology', in Angela M. Labrador and Neil Asher Silberman (eds), The Oxford Handbook of Public Heritage Theory and Practice (Oxford, 2018), pp. 213–228.

comparative dimension situates the Devidhar cup marks within a wider pattern of Himalayan rock art and highlights the features that render this site distinctive.

4. The site: Devidhar in its spatial and cultural setting

Devidhar, at 29.81°N, 80.09°E, is a ridge-top site some three kilometres from Lohaghat town in Champawat district. A road branches from the Lohaghat–Pancheshwar highway towards the Devidhar temple complex, and the cup-mark site lies some two hundred metres south-west of the Maa Bhagwati Temple, immediately adjacent to this road. The surrounding cultural landscape includes Daisli village, several smaller shrines, and an open area that serves as a gathering space during festivals. Together, these elements constitute a coherent sacred geography within which the cup marks occupy a structurally significant position.¹¹

The archaeological features consist of two large schist slabs, designated Rock A and Rock B. Both slabs show signs of natural weathering, including minor lichen and grass growth in surface crevices. Despite this weathering, the cup marks remain clearly visible, attesting to the considerable depth and deliberateness of their original carving.



[Figure 1: Rock A — cup marks CM1–CM7 with photogrammetric overlay]



[Figure 2: Rock B — cup marks CM8–CM11 with condition assessment]

4.1 Archaeological description

Rock A contains seven well-preserved cup marks, CM1 to CM7. Rock B contains one well-preserved cup mark, CM8, and three fragmented depressions, CM9 to CM11. The marks are notably large by regional standards. CM4 is the deepest, with a recorded depth of some 19.5 inches (49.5 centimetres) and a diameter of six inches (15.2 centimetres). Photogrammetric modelling gives an average volume of 3.2 litres, significantly larger than the average of approximately 0.5 litres recorded at other Kumaoni cup mark sites.¹² Tables 1 and 2 present the morphometric data.

Table 1. Morphometric data for cup marks at Devidhar, Lohaghat

¹¹Verma, Janpad Champawat ke Darshaniya Sthal.

¹²Mathpal, Rock Art in Kumaon Himalaya; author's fieldwork measurements, Devidhar, 2024–5.

CM No.	Depth (in.)	Diameter (in.)	Location	Condition	Remarks
1	7.5–10	5.5	Rock A, No. 1	Well-preserved	—
2	7.5–11	5.5	Rock A, No. 2	Well-preserved	—
3	9.5–13.5	6.0	Rock A, No. 3	Well-preserved	—
4	c. 19.5	6.0	Rock A, No. 4	Well-preserved	Deepest cup mark
5	c. 7.5	5.0	Rock A, No. 5	Well-preserved	Smallest cup mark
6	c. 14.5	5.5	Rock A, No. 6	Well-preserved	—
7	c. 13.5	6.0	Rock A, No. 7	Well-preserved	—
8	12–14.5	5.5	Rock B, No. 1	Well-preserved	—
9	—	—	Rock B, No. 2	Fragmented	Fragment 1
10	—	—	Rock B, No. 2	Fragmented	Fragment 2
11	—	—	Rock B, No. 2	Fragmented	Fragment 3

Table 2. Comparative site data — Devidhar in regional context

Site	No. of CMs	Avg. dia. (in.)	Avg. depth (in.)	Associated feature	Interpretation	Remarks
Devidhar, Lohaghat (Champawat)	11	5.0	10.0	Maa Bhagwati Temple; Dola Yatra route	Ritual / sacred	Largest recorded in Kumaon region



[Figure 3: Cup Mark No. 5 — the smallest example on Rock A]



[Figure 4: Cup Mark No. 4 — the deepest example on Rock A]

4.2 Ethnographic context: the Dola Yatra and the myth of the mortar

The annual Dola Yatra festival involves carrying deity icons in sacred palanquins, or *dolas*, from Daisli village to the Devidhar temple. Without exception, the informants interviewed for this study narrated that the cup marks are the *okhli*, the mortar the goddess used during the primordial churning of the cosmic ocean, the *Samudra Manthan*. This oral tradition does not merely describe the marks as ancient; it assigns them a specific, named identity within a sacred narrative framework.¹³

More significantly, devotees do not merely observe the marks during the festival but actively incorporate them into ritual practice. Bearers ceremonially pause the processional *dolas* beside the cup marks, and devotees place votive offerings within the depressions. This ritual behaviour transforms the Devidhar cup marks from ambiguous prehistoric artefacts into named, intentional features within a living sacred landscape, precisely the pattern of persistent place-making that the theoretical framework of this study predicts and seeks to document.

5. Discussion: syncretism and the persistent landscape

5.1 From prehistoric symbol to Hindu ritual feature

The evidence assembled in this study suggests a compelling case for long-term cultural continuity at Devidhar. The exceptional size and prominent topographic placement of the cup marks argue persuasively for a special, non-utilitarian purpose in their original prehistoric context. Their location on a visible ridge-top conforms to global patterns in which ritual rock art occupies liminal, high-visibility locations that mediate between the human and the suprahuman.¹⁴ Centuries later, through a process of symbolic syncretism, the dominant Hindu tradition incorporated the same features into its mythology. The prehistoric ritual function was thus not erased but recalibrated, and this recalibration ensured the site's preservation through its continued cultural utility and the active maintenance of community memory.

¹³ Author's fieldwork interviews, Daisli village and Devidhar temple complex, 2024–5.

¹⁴ Tacon, 'Rainbow colour and power'.

This process of recontextualisation is not unique to Devidhar. Comparative evidence from central India and the broader Himalayan region demonstrates that later religious systems frequently absorb prehistoric rock art features when they sit close to topographically or otherwise significant locales.¹⁵ What distinguishes Devidhar is the exceptional specificity and consistency of the oral tradition: informants across different villages and age groups narrate the story of the goddess's *okhli* in a strikingly uniform way, suggesting a well-established and widely shared cultural memory rather than an improvised or idiosyncratic explanation.

5.2 Implications for Himalayan archaeology

This study demonstrates that a strict binary between 'prehistoric' and 'historical' periods is analytically misleading when applied to lived landscapes characterised by long-term habitation. The Devidhar site constitutes a cultural palimpsest in which each generation has inscribed meaning upon the same physical substrate, with the oldest layer, the cup marks themselves, forming the resilient parchment upon which later narratives have been written.¹⁶ This observation carries methodological implications for archaeologists working in regions of comparable depth of habitation: they should treat ethnographic data not as supplementary colour but as a potentially indispensable key to understanding ancient symbol use and the social logic of landscape construction.

5.3 Conservation as an ethnographic imperative

The documented fragmentation of three cup marks at the Devidhar site, CM9 to CM11, highlights the physical vulnerability of these features to natural weathering and, potentially, to human disturbance. A conservation strategy premised solely on physical stabilisation would, however, remain incomplete and ultimately insufficient.¹⁷ Successful stewardship of sites such as Devidhar must involve the local community as the primary and most consequential stakeholders. Framing conservation as the protection of the community's own sacred geography, rather than as the externally imposed preservation of an abstract archaeological asset, makes it possible to align the goals of professional archaeology with the cultural priorities and the ongoing religious practice of the Kumaoni community. Conservation, in this sense, becomes an ethnographic action as much as a technical one.

6. Conclusion and future research directions

The cup marks of Devidhar are more than simple petroglyphs. They are active participants in an enduring cultural landscape: simultaneously prehistoric artefacts and living sacred features, material evidence and social text. This research offers a model for integrating archaeological science with ethnographic sensitivity in order to unravel the complex biographies of non-figurative rock art. The Devidhar site demonstrates that the persistence of prehistoric symbols in living tradition is not merely a curiosity but a fundamental dimension of the Himalayan sacred landscape, one that demands, and richly rewards, interdisciplinary investigation.

The present study suggests three future research directions. First, micro-erosion analysis may yield absolute chronological data for the cup marks, situating them within a more precise temporal sequence. Second, a LiDAR survey of the surrounding landscape may reveal associated archaeological features currently concealed by dense forest cover. Third, an expanded comparative study, entailing a systematic re-survey of other Kumaoni cup mark sites with comparable ethnographic methodology, would test whether the pattern of symbolic persistence documented at Devidhar is a regional norm or a site-specific phenomenon.

¹⁵Pathak and Clottes, 'Cup marks in Central India'.

¹⁶Ingold, *Perception of the Environment*.

¹⁷Colwell, 'Collaborative archaeology'.

By approaching sites such as Devidhar as persistent places, as nodes of accumulated cultural memory rather than as inert survivals from a sealed past, this paper contributes to a more holistic archaeology of the Himalayas, one that respects the depth of time and honours the vitality of continuing tradition.

Acknowledgements

The author is grateful to the priests, elders, and residents of Daisli village and Lohaghat who generously shared their time, knowledge, and oral traditions during fieldwork. [Institutional acknowledgement withheld for anonymous peer review; to be restored at the pre-production stage.] Any errors of fact or interpretation that remain are the author's sole responsibility.

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List of Figures

Figure 1: Rock A, Devidhar site. Seven cup marks (CM1–CM7) shown with photogrammetric depth overlay. Photograph and model by the author.

Figure 2: Rock B, Devidhar site. Cup mark CM8 and fragmented depressions CM9–CM11. Photograph by the author.

Figure 3: Cup Mark No. 5, Rock A — the smallest example recorded at the site (depth c. 7.5 in.; diameter 5 in.). Photograph by the author.

Figure 4: Cup Mark No. 4, Rock A — the deepest example recorded at the site (depth c. 19.5 in.; diameter 6 in.). Photograph by the author.

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