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Significance of Megalithic Monuments in Mudumal

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Abstract

This study focuses on the Mudumal megalithic complex, a prominent prehistoric site in the Narayanpet district of Telangana, dating back approximately 3,000 years. Field investigations conducted in this region, combined with a detailed examination of earlier scholarly reports, have brought to light a wide range of architectural forms associated with the megalithic cultural tradition. These findings provide crucial insights into the social, ritual, and technological practices of the communities that once inhabited this area. At the Mudumal site, diverse types of megalithic features have been documented, including cist burials, cairn burials, large upright stone slabs known as menhirs, systematically arranged alignments, and symbolic engravings such as cup marks and petroglyphs carved onto rock surfaces. These structures reflect not only funerary customs but also indicate multiple functional dimensions ranging from memorial practices to astronomical observations.

Keywords: Megalithic, Menhir, Cist, Alignment, Cup marks, Petroglyphs, Cairn.

1. Introduction

Megaliths are the burials, memorial structures, and astronomical constructions belonging to the Megalithic Age. The term megalithic is derived from the Greek words ‘mega’ meaning large and ‘lithic’ meaning stone. Since the structures of this period were built using massive stone slabs, the era came to be known as the Megalithic Age. In South India, this period also marks the first extensive use of iron, and therefore it is often referred to as the Iron Age. The period between 1000 B.C. and 300 B.C. in Southern India and the Deccan is considered a significant phase in the development of the Megalithic Culture (Sundara 1975:198–216). However, megalithic cultures did not emerge simultaneously across all regions. For instance, megalithic structures date to around 500–100 B.C. (Narasimhaiah 1980:174-183), while in Komaranahalli, they appear around 1440 B.C. (K.P. Rao, 1990).

Archaeological excavations across different parts of the Indian subcontinent have revealed a wide diversity in megalithic constructions. Despite variations in form, construction technique, and size, these monuments collectively reflect a distinctive and enduring cultural tradition of ancient India. The presence of a large concentration of menhirs—each rising to a height of nearly 15 feet—at this site is an exceptionally rare phenomenon. Remarkably, after Stonehenge in England, this stands as one of the

largest megalithic complexes. In the Mudumal region, a prominent stone alignment is interpreted as an astronomical observatory, featuring an ancient sky chart that is believed to represent the Ursa Major (Saptarṣi) constellation.

THE GEOGRAPHICAL CONDITIONS OF MUDUMAL:

Mudumal is a village situated in Krishna Mandal of Narayanpet District in the state of Telangana. Approximately 4 kilometres west of the village, on the banks of the 'Krishna River', lies a megalithic complex spread over nearly 80 acres . This site has gained Global recognition as a prehistoric Astronomical observatory and has been included in the "UNESCO Tentative List" in The year of 2025.The site contains more than 80 large menhirs, each measuring about 10–15 feet in height, arranged in several rows. In addition to these, there are over 3,000 smaller menhirs scattered across the area. The complex also features cairn burials. These menhirs are locally known as 'Niluvu Rallu' and 'Timmappa Rallu". Many of the megalithic monuments in this region have been significantly damaged due to agricultural expansion, ploughing, and landscape modifications, and some have even been completely destroyed. Consequently, the archaeological integrity of the site has suffered substantial loss.

EARLY STUDIES ON THE MUDUMAL MEGALITHIC COMPLEX:

The earliest scientific references to the Mudumal megalithic site date back to the 1940s. During this period, K. Krishnamurthy, a geologist working under the Nizam administration, first identified the presence of significant prehistoric remains in the region and published his findings in the journal "Geological Report of Hyderabad". Recognising the archaeological importance of the site, it was subsequently included in the protected list in 1942 during the reign of "Mir Osman Ali Khan", the seventh Nizam of Hyderabad. However, archaeological investigations conducted during this initial phase were very limited. The early work consisted mainly of brief reports and preliminary observations on the large menhirs and their associated funerary features.No systematic excavations or detailed scientific documentation were undertaken at that time.

Professor K. P. Rao of the Department of History, University of Hyderabad, has been conducting extensive research on the Mudumal Megalithic Site since 2003. Over the years, he has presented his findings through numerous research papers at various national and international seminars.Professor Mayank vahia of the Department of Astronomy and Astrophysics, Tata institute of fundamental research .He has also conducted extensive research across India on the connections between Megalithic culture and astronomy.

METHODOLOGY:

The author adopted an integrated methodology combining primary sources, secondary literature, and field-based investigations to conduct this research.

Primary Sources: The study draws on primary archaeological data, including excavation and survey reports published by the Archaeology Department of Hyderabad start.

Secondary Sources: Relevant literature such as scholarly articles, research papers, books, and previous studies on megalithic cultures and astronomical features were consulted to provide a comparative and interpretive framework.

Fieldwork: Extensive field investigations were undertaken at the study sites to document monuments, alignments, architectural features, spatial patterns, and their potential astronomical orientations. Measurements, photographic documentation.

MUDUMAL MEGALITHIC COMPLEX:

Menhir: Menhirs are large, monolithic stone pillars that are firmly set and erected vertically in the ground. They are typically roughly hewn, though some are left in their natural, unworked state. These standing stones are generally interpreted as memorial markers, erected to honor the deceased. In this area, there are over 80 menhirs, each ranging in height from 10 to 15 feet. Some of these menhirs are leaning to one side, while others have completely fallen. The local people worship one of the menhirs as Ellamma, and another is venerated as Thimmappa.

Alignment: Generally, when two or more menhirs are arranged in a row, they are called alignment. In some locations, these alignment are systematically arranged, while in others they appear irregular. They were constructed as memorials for individuals who had died during that period. In certain cases, these structures were also built for astronomical purposes, to observe time and seasons. Similarly, rows of smaller menhirs arranged in sequence are referred to as avenues. Such avenue-like structures Nilaskal ,Baise , Hergal ,Mumbaru are found in the state of Karnataka, and they too are associated with astronomical studies.

Cup marks: Cup marks are small, circular depressions carved into rock surfaces, commonly found on megalithic structures. At this site, one menhir displays two rows of seven cup marks each. On another menhir lying on the ground in this area, there are more than 70 cup marks. At Site 2 in Mudumal, Professor K. P. Rao identified the cup marks on a rock as representing the Saptarshi (Ursa Major) constellation.

Figure 1:Trident shape petroglyph, mudumal.

Petroglyphs: Petroglyphs, created by carving or incising designs on rock surfaces, have been in use since the Paleolithic era. At Site 2 in Mudumal, a large number of petroglyphs depicting trident motifs have been documented. Similar trident-shaped engravings are found at several other megalithic sites across the Deccan region. These trident motifs may represent a commonly used hunting weapon of the time, reflecting aspects of the subsistence practices of early communities.

Cairn: At Site–2 in Mudumal, several megalithic Cairn burials (stone circles)have been identified. In each burial, 15–20 rounded stones are arranged in a circular pattern around the central feature. Such types of cairn burials are widely reported across the Deccan region, indicating that this funerary practice was a significant cultural trait of the megalithic communities.

Cist: In certain parts of this area, traces of cist burials have been observed. Due to the levelling of agricultural fields, the remnants of these cists are now visible along the edges of the field bunds, indicating that the original burial structures were disturbed during cultivation activities.

Astronomical Interpretation centre:

At Site 1 of this Mudumal, several rows of menhirs appear to have been oriented toward the direction of the rising or setting sun during the onset of Uttarayana, Dakshinayana, and the equinoxes. Such deliberate spatial arrangements indicate that the ancient communities who erected these stones possessed a keen understanding of seasonal changes in the solar trajectory. It is likely that they used these observations to monitor the shifting seasons, anticipate the arrival of the monsoons, and regulate their agricultural activities accordingly.

However, many of the menhirs have tilted sideways or collapsed completely, making it difficult to reconstruct their original alignment with full accuracy. Although India has several megalithic sites with menhir alignments, very few contain such a large number of stones of this remarkable height and scale. This makes the Mudumal site particularly exceptional within the broader corpus of Indian megalithic traditions.

Figure 2:Stone alignment(astronomical interpretation centre) of mudumal.

Megalithic sky map:

At Megalithic Site–2 in Mudumal, more than 2,000 rounded stone balls are dispersed extensively across the landscape. On one of the large slab stones, a distinctly organized pattern of cup marks has been documented. Professor K. P. Rao conducted detailed studies of these cup marks and interpreted them as an astronomical representation.

According to Professor Rao's analysis, the arrangement of these cup marks corresponds with remarkable precision to the seven principal stars of the Saptarshi (Ursa Major) constellation—Dubhe, Merak, Phecda, Megrez, Alioth, Mizar, and Alkaid. The spatial layout, relative distances, and angular relationships of the cup marks closely mirror the configuration of these stars. This striking alignment indicates that the carvings were not merely decorative motifs, but rather reflect a sophisticated understanding of astronomy among the ancient community. This feature demonstrates that the prehistoric society likely used constellations as a practical tool for interpreting seasonal changes, determining directions, and conducting night-sky observations. Such evidence provides significant archaeological insight into the cognitive and cultural capabilities of the builders of this site.

Figure 3:Cup marks (ancint sky chart) of mudumal.

Conclusion

This region served not only as an astronomical observation centre but also as a significant burial complex of the megalithic period. Numerous Crain burials and cist burials have been discovered here, offering important evidence of the religious beliefs, mortuary customs, and funerary practices of the people of that time.

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