

Megalithic Culture Research in Banyuwangi, East Java Province, Indonesia

Penelitian Budaya Megalitik di Banyuwangi, Jawa Timur, Indonesia

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ABSTRACT

Previous research on the megalithic cultures of East Java, Indonesia was carried out in the regions of Situbondo, Bondowoso, Jember, and Probolinggo. The results demonstrated that there is a diversity of megalithic monuments and cultures in the area, both in terms of form and chronology. The latest project undertaken by the Megalithic Culture Research Team in Banyuwangi focuses on the megalithic monuments in Banyuwangi, the easternmost region of East Java. This research was conducted using surveys and excavations. The project has demonstrated that Banyuwangi possesses dolmens, a type of megalithic monument uncovered by excavation. Pottery fragments and beads were also recovered from the megalithic sites. Dating of pottery retrieved from the same contexts as the dolmens suggest that the megalithic culture of Banyuwangi originated in the 3rd to 6th centuries CE, or in the protohistoric period. This date is the oldest when compared to other megalithic cultures in East Java. Thus, the results of this study contribute important new archaeological data to the diversity of megalithic cultures in Indonesia.

ABSTRAK

Penelitian sebelumnya tentang budaya megalitik Jawa Timur, Indonesia dilakukan di daerah Situbondo, Bondowoso, Jember, dan Probolinggo. Hasilnya menunjukkan bahwa terdapat keragaman monumen dan budaya megalitik di daerah tersebut, baik dari segi bentuk maupun kronologis. Proyek terbaru yang dikerjakan tim penelitian budaya megalitik di Banyuwangi berfokus pada monumen megalitik di Banyuwangi, wilayah paling timur Jawa Timur. Penelitian ini dilakukan dengan metode survei dan ekskavasi. Proyek tersebut telah menunjukkan bahwa Banyuwangi memiliki dolmen, sejenis monumen megalitik yang ditemukan melalui penggalian. Pecahan tembikar dan manik-manik juga ditemukan dari situs megalitik. Penanggalan tembikar yang diambil dari konteks yang sama dengan dolmen menunjukkan bahwa budaya megalitik Banyuwangi berasal dari abad ke-3 hingga ke-6 Masehi, atau pada periode protohistoric. Pertanggalan ini merupakan yang tertua jika dibandingkan dengan kebudayaan megalitik lainnya di Jawa Timur. Dengan demikian, hasil penelitian ini memberikan kontribusi data arkeologi baru yang penting bagi keragaman budaya megalitik di Indonesia.

Keywords: megaliths, research, Banyuwangi, Indonesia | megalitik, penelitian, Banyuwangi, Indonesia

INTRODUCTION

Megaliths are usually defined as structures made of large stones, usually rough and untidy, which are characterized by certain types (Perry 1918:10). A megalithic culture is a form of human creation that is characterized by megalithic objects in the form of stone buildings. The term megalith comes from the Greek *mega* (big) and *lithos* (stone). The term megalithic has a meaning as a culture that characterizes megalith buildings or buildings made of large stones. Megalithic culture is a manifestation of establishing a relationship between the living and the dead. The spirit of someone who has died will not just disappear but has lived in its own realm. There is a belief that these spirits are always in contact with people who are still alive and are considered to have a strong influence on the welfare of society (Tanudirjo et al. 2012: 305). Fritz A. Wagner argues that a megalith which is defined as a large rock will lead to a misunderstanding because even objects made of small stones can be included in the megalith criteria if these objects are clearly made with sacred purposes such as worship of ancestors (Fritz A Wagner, 1959:23-24). Therefore, it can be concluded that megaliths are stone objects or buildings resulting from megalithic culture, while megalithic culture is defined as a culture that produces buildings or objects made of large or small stones (Tanudirjo et al. 2012: 305). According to Robert von Heine-Geldern, the megalithic culture that entered Indonesia can be divided into two waves. The first wave occurred in the Neolithic Age by speakers of Austronesian languages, roughly between 2500-1500 BCE. The first wave is called the old megalithic culture. This old megalithic culture was brought by immigrants via Tonkin to West Malaysia and entered Indonesia via Sumatra. From Sumatra, some of it continues to Java and Nusa Tenggara, while some of it spreads to Kalimantan and continues to the north. The next wave entered during the early period of bronze and iron which came together with the Dong Son culture, namely between the 4th – 3rd centuries BCE. This wave was then called the younger megalithic culture von Heine Geldern via van Heekeren, 1958:44-45). The assumption about immigrants spreading megalithic culture so far has only been based on research on material objects and comparisons within the areas where they were spread, so this is a weakness that needs to be limited. This weakness also occurs in the lack of dating data on megalithic sites in Indonesia (Tanudirdjo et al. 2012: 310).

Megalithic research in Indonesia is intensively carried out by researchers under the National Archaeological Center. Bagyo Prasetyo summarizes the dates of 25 megalithic sites in Indonesia to reconstruct the history of megalithic culture in Indonesia (Prasetyo 2015:57-63). Sumatran megalithic chronology obtained through the dating of the Nias megalith excavations. Charcoal samples from the Tundrumaho megalith context are known from around the 15th and 17th centuries CE. Charcoal from the Hiligeo megalith context is from around the 15th to the 20th centuries CE. Dating data from the Limapuluh Koto site are known to date from the 10th century until the 13th century CE. In Kerinci, Jambi, it is known that the dating of the Bukit Arat site dates from the 7th and 11th centuries CE, Dusun Tinggi around the 4th and 7th centuries CE, and Bukit Batularung around the 10th and 19th centuries, and Renah Kemumu around the 11th, 12th, and 13th centuries CE. In Pagar Alam (Pasemah), the chronology starts from around the 15th, 17th, and 20th centuries CE. The oldest chronology is estimated to be around the 3rd century to 6th century.

Not much is known about the chronology of megaliths in Java, except for West and East Java. At Gunung Padang, it is known that the dates indicate the age of 45 BCE and 22 CE (Prasetyo 2015:57-63). Research to trace the dating of megalithic sites in East Java was carried out in several places. At the Bojonegoro Kalang Grave site it is known that the date is around the 15th to the 17th centuries CE.

At the Doplang Site, Jember the dating is around the 13th-15th centuries CE. The Krajan Bayeman site, Situbondo is dated around the 6th and 11th centuries. The Pedaringan site is dated around the 10th and 14th centuries CE. The Dawuhan site is dated around the 7th and 8th centuries CE.

In Eastern Indonesia, research to determine megalithic dating was carried out in the Poso and Minahasa regions. Tetelu 2 site, Minahasa dated 351 and 207 BCE; 228 and 222 BCE; and 210 BCE and 69 BCE. The Wineki site is dated between 39 BCE and 8 BCE; 4 BCE and 19 BCE. Other sites are known to have a younger range, such as Woloan 1 around the 4th to 7th century CE. Woloan 2 site around the 7th to 9th century (Prasetyo 2015:57-63).

Research on megalithic culture at the Mulyosari site contributes data to the megalithic culture of Banyuwangi, which has not been studied much so far. Van Heekeren in his book mentions reports of the discovery of megalithic remains in the East Java region, especially in the eastern part (1958:46). In early 1898, H.E. Steinmetz published an amazing summary of his time, namely the findings of megalithic remains around Bondowoso. The findings included sarcophagi and dolmens that resemble tombs, decorated with human and animal figures and geometric motifs. The image is at the bottom of the rock or engraved directly on the rock structure. Almost all the graves in Bondowoso have been looted.

J.B. Hubenet reports that in 1903 a dolmen resembling a tomb was found during the construction of the railway line between Kalisat and Banyuwangi. The dolmen is a small vertical rock, surrounding a human skeleton, and supported by a large capstone over two meters long and one meter on its widest sides. All stones are monoliths in rough condition and uncut. The tomb contained human bones and teeth and 72 fine beads. On the side of the Dolmen lies a hollow rock, tapering downwards, 15 cm in size. When observed from the diameter and depth; perhaps a hollow stone was used as a mortar for grinding grain. Another dolmen was excavated by B. de Haan in 1921, during the construction of a road between Garahan and Mrawan, three kilometers from Pasar Alas station (Van Heekeren, 1958:46).

The dolmen is covered by a 50 cm layer of humus, beneath which is an 18-20 cm layer of volcanic sand from the eruption of the Raung Volcano. This dolmen, placed in an East-West direction, appears to be another example of a dolmen of the simplest type. There is no floor and the covering stone is natural stone slabs and has not been quarried. In front of the grave is a circle made of river stones. A long stone is located 1.5 meters from the front of the closing stone, in the form of a flat stone on the side. All of these stones are in a form level with the bottom of the closing stone resting on the supporting stone. Supporting stones were set to form a closed chamber that contained: 43 human molars, 5 canines, 6 incisors, and about 79 beads of various sizes. The entrance to the tomb is on the west side and is closed with a piece of rock. Unfortunately, human bones shattered when touched, but from the number of teeth, it appeared that there were at least three corpses. Small gold rings were also found in these graves, the ends were somewhat thickened and held together. The beads differ greatly in size and color; the largest is 45 mm in diameter, while the smallest, pearl-colored terracotta, is only about 3 mm. The large beads are yellow and green, dark blue with a white eye, plain yellow, plain green, and red-golden yellow. They are egg-shaped, flat on top and bottom, with a cylindrical open core (van Heekeren 1958: 46-47). Starting from these reports, van Heekeren then continued his research in the eastern part of East Java, such as in Bondowoso and Besuki. From 1929 to 1932 van Heekeren was involved in studying megalithic objects in the easternmost part of Java. Heekeren's writing has not specifically reviewed the



Fig.1 Location of Mulyosari Site. Source: Balai Arkeologi Yogyakarta, 2021.

megalithic remains in Banyuwangi. Starting from Heekeren’s writings, research on megalithic culture in Banyuwangi has been conducted since 2016. Information received by the research team, there are megalithic remains in the coffee plantation area owned by a state-owned company known as PTPN 12. This location is at the Mulyosari Site, Kebun Malangsari, Kalibaru area, Banyuwangi, East Java.

MAIN SECTION

Mulyosari is located at 8°22’56.8” S 113°56’38.7” E, south of Mount Raung (3260 m asl) and in a coffee plantation complex owned by PT Perkebunan Nusantara XII in Afdeeling Mulyosari, Malangsari Garden. The Mulyosari site is located at an altitude of 600-670 meters above sea level with a rough surface relief. The Mulyosari site has relatively cooler air when compared to the air in the Banyuwangi City area. This site, as mentioned in the previous section, is in the northern part of the Meru Betiri Complex. According to the characteristics of the land, Mulyosari is suitable for coffee plants. Coffee planting is carried out throughout the year without rotation with other crops. It is among these coffee plants where the megalithic remains are located.

Administratively, the study area is located in Kebonrejo Village, Kalibaru District, Banyuwangi Regency which is included in the area with wet and dry tropical climates with the largest average rainfall reaching 257 mm and the smallest average rainfall is 28.6 mm. Based on the results of the delineation of the research location on the 1992 Geological Map of the Jember Sheet with a scale of 1:100,000 made by Sapei et al. (1992) The lithology of the research location is in the Sukamade Formation which consists of claystone interspersed with siltstone and sandstone. In this formation, there are sedimentary structures with parallel, crisscross, convoluted and massive local stacked layers. The thickness of this formation is ± 300 meters. This formation was deposited in an open marine environment on underwater slopes and is interspersed with volcanic rocks of the Merubetiri Formation.

Based on this finger relationship, the Sukamade Formation is estimated to be Late Oligocene - early Middle Miocene.

Based on the topographic map observations, the research area in Afdeeling Mulyosari is divided into ten sectors, namely sectors 1, 1A, 1B, 1C, 2, 2A, 2B, 3, 4 and 5. The division of sectors is based on the physiography of the study area. This makes the river a boundary between sectors. In addition, the administrative boundaries of Afdeeling Mulyosari are also one of the factors that influence sector development in the research area.

The process of collecting data on the Mulyosari Site is carried out to answer the formulation of the problem posed. Data collection consists of excavation and survey. The excavations were carried out in three sectors, namely sector 1, sector 4, and sector 5. The excavations in sectors 1 and 5 are follow-up excavations from 2019, while the excavations in sector 4 are excavations that have just been carried out in research in 2021. Meanwhile, the survey was conducted in sector 1, 1A, 1B, 1C, 2, 2A, 2B, 3, 4, and 5. The survey was conducted to obtain geomorphological data for landscape analysis as a complement to survey data for 2018 and 2019. (Taniardi et al. 2019)

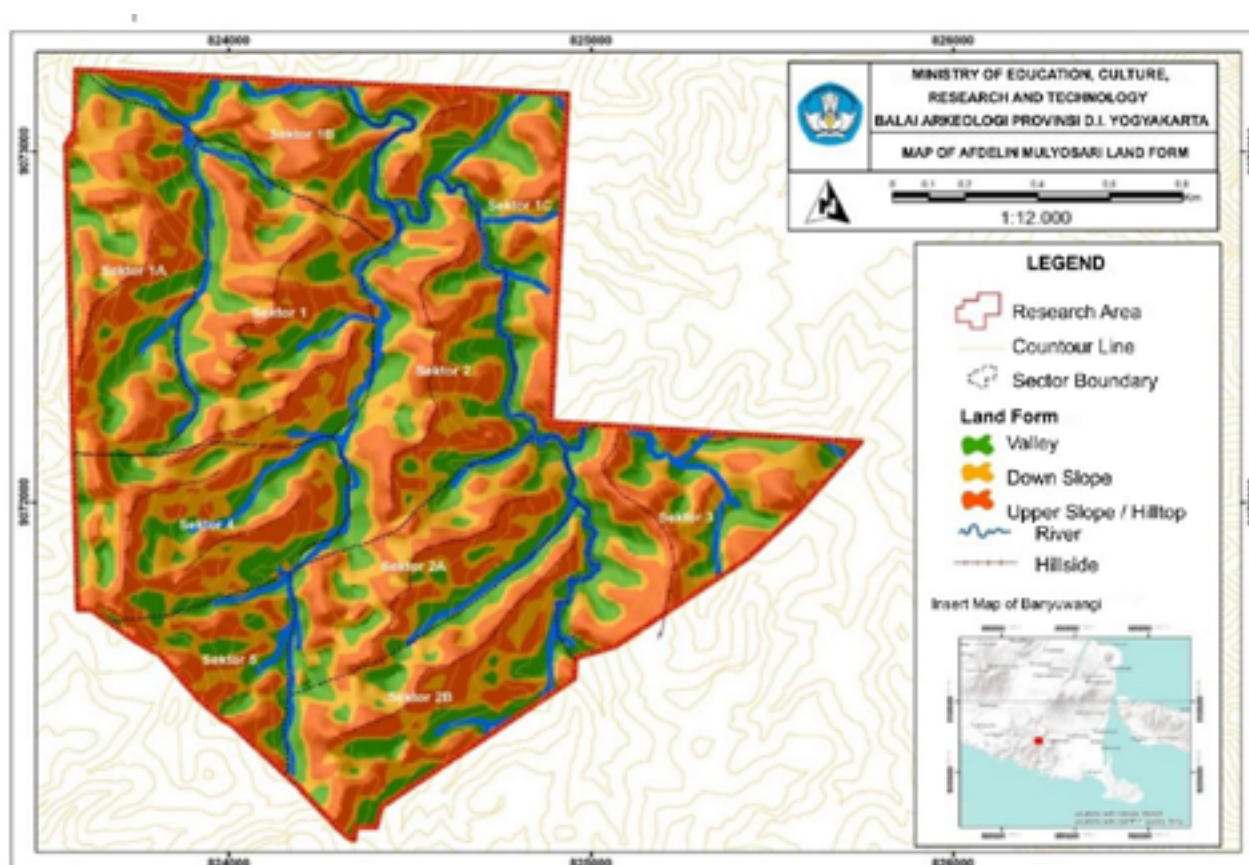


Fig. 2 The Land Form of Mulyosari Site. Source: Balai Arkeologi Yogyakarta.

The megalithic remains in sector 1, in squares U1T1, U1T2, U2T1, and U2T2 are dolmens with the dimensions of the covering stone being 132 cm long, 129 cm wide, and 70 cm high. Around the dolmen, there is a circular arrangement of stones. The dolmens use andesite rock in the cover as its constituent material. While the supporting stones are made of tuff rock. The source of andesitic rock material closest to sector 1 is located at 8° 22' 58.7" S, 113° 56' 30.9" E which is included in sector 4 area. The distance between the source of andesite rock material and the dolmens is 175 m. The sources of rock supporting the dolmens and circular stone structures in the form of white and yellow tuff are in the vicinity of sector 1. The nearest source of white tuff is located at 8° 22' 35.8" S, 113° 56' 44.1" E, included in the sector 1 with a distance of 697 m. The nearest source of yellow tuff is located at 8° 22' 38" LS, 113° 56' 47.3" E, included in sector 2 with a distance of 718 m (Taniardi et al. 2021).

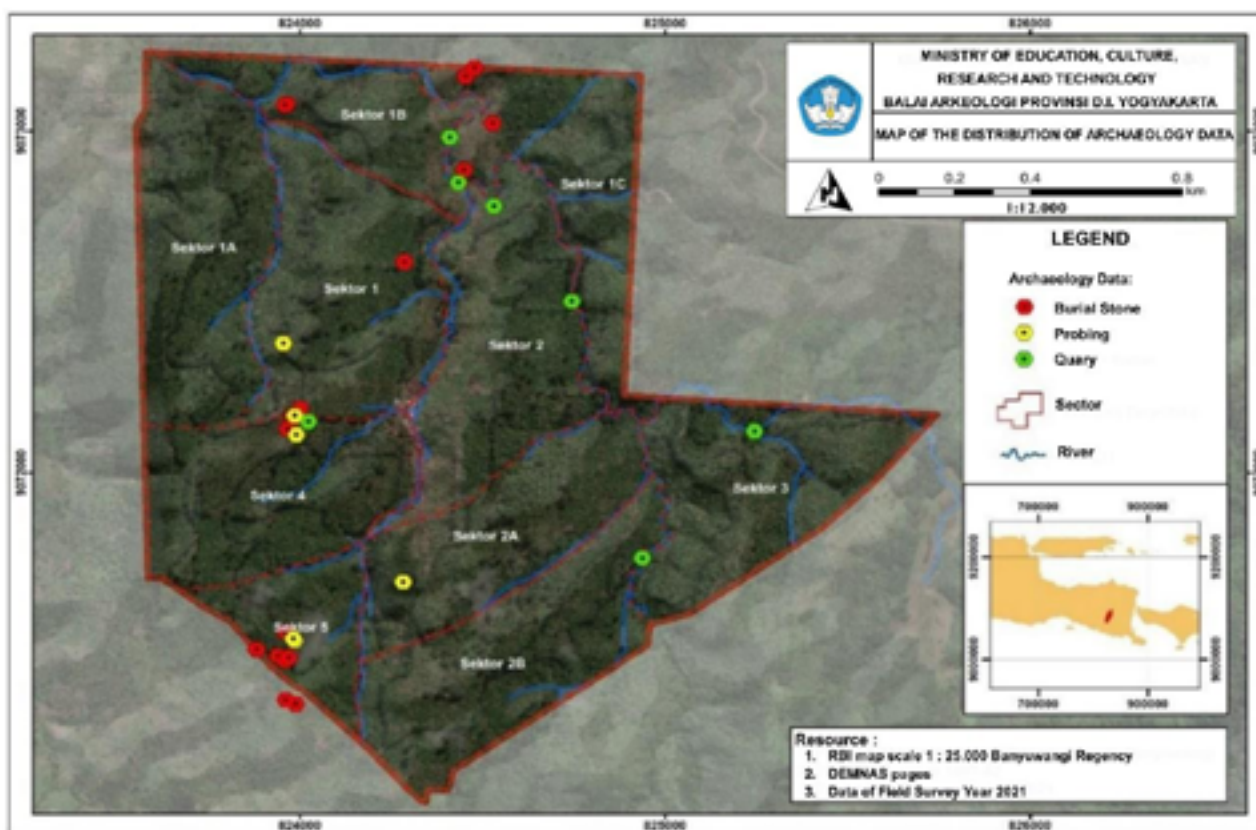


Fig. 3 The Distribution of Archaeology Data. Source: Balai Arkeologi Yogyakarta.



Fig. 4 Dolmen Type 1 from Sector 1.
Source: Balai Arkeologi Yogyakarta.

Sector 1

The results of the excavations show that the cultural materials accompanying the dolmens are pottery fragments and beads. The pottery fragments found from both the S1T2 and S1T1 boxes as well as from the U1T1 and U1T2 boxes were ancient pottery. This is known from the analysis of the shape of the pottery fragments. Some of the ancient pottery was found starting from spit 12 (110-120 cm). Pottery fragments with decorative stripes were also found from spit 12 squares of sector 1. Apart from the line patterns, there were also pottery that had chipped motifs on the edges. Meanwhile, most of the bead findings were glass beads (Taniardi et al. 2021).



Fig 5 Boulders that are thought to be megalithic remains.
Source: Balai Arkeologi Yogyakarta

Sector 4

The megalithic remains in sector 4 are hollow boulders with observable dimensions, namely length: 57 cm, width: 50 cm, thickness: 60-70 cm. The source of white tuff is located at 8° 22' 35.8" S, 113° 56' 44.1" E with a distance of 827 m. Material culture as an accompanying finding in the U3T1 box is in the form of pottery fragments. Pottery fragments originate from the topsoil or from the depth of the spit at the beginning of the excavation process. Nothing was found other than pottery fragments until the excavation was stopped at a depth of 90-100 cm (spit 10) (Taniardi et al. 2021).



Fig 6 Dolmen Type 2 from Sector 5.
Source: Balai Arkeologi Yogyakarta.

Sector 5

The megalithic remains in sector 5 are two dolmens with the following dimensions. Dolmen 1 in box S1B1 has length: 74.3 cm, width: 82.4 cm, height: 56.7 cm. Dolmen 2 in squares S1B1, U1B1, U1B2, and S1B2 has length: 89.3 cm, width: 80 cm, height: 101.3 cm. This dolmen is made of a type of tuff rock. The closest source of tuff rock to sector 5 is located at 8° 22' 35.8" S, 113° 56' 44.1" E which enters sector 1 B. The distance between sector 5 and the source of material is 1425m. (Taniardi et al. 2021).

DISCUSSION

Until now, the Mulyosari Site is the only megalithic site in Banyuwangi that has been studied intensively. The megalithic remains at the Mulyosari Site show a distinctive character when compared to megalithic sites around Banyuwangi. The dolmens at the Mulyosari Site have a different character when compared to the dolmens at Bondowoso, namely in the form of supporting stones that form the walls and the position of the dolmens which are underground. The uniqueness of the dolmens at the Mulyosari Site then prompted the research team to trace the chronology of the Mulyosari Site's dating. It aims to find the relationship between the Mulyosari Site and other megalithic sites in East Java.

Dating analysis was carried out in 2019 by taking soot earthenware samples and charcoal samples. This sample was taken from sector 1, from box S1T2 on Spit (10) and (11) or a depth of 100-110 cm, in the rock feature to the southeast of the dolmen (Taniardi et al. 2019). The sample is then sent to the Beta Analytic laboratory for dating, the results of which show that the megalithic age range is between the 4th and 5th centuries CE. This analysis was then reconfirmed by sending samples dated from the S1T2 box with the same depth and context to the laboratory of The University of Waikato. The results of the dating analysis show that it is the 3rd century CE, thus confirming the results of the 2019 dating analysis.

In addition to samples from box S1T2 located in sector 1, the team also sent dating samples from sector 5. Charcoal samples were taken from box S1B2 in Spit (12) or a depth of 120 cm in dolmen boxes S1B1, U1B1, U1B2, and S1B2, to be precise at Lot 1 and Lot 2. Lot 1 is the upper dolmen, while Lot 2 is the lower dolmen. Between Lot 1 and Lot 2 it is bounded by flat stones. The existence of this boundary stone indicates that there was some kind of compartmentalization in Lot 1 and Lot 2. The results of the dating analysis show that the time span is between the 3rd and 6th centuries CE.

Compared to the megalithic culture around Banyuwangi (Situbondo, Bondowoso, and Jember, the dating results from the Mulyosari site are relatively much older. The Kubur Kalang Bojonegoro site produces dates around the 15th to 17th centuries CE. Dopleng site, Jember dated around the 13th to 15th centuries CE. The Krajan Bayeman site, Situbondo produced dates around the 6th and 11th centuries CE. The Pedaringan site produced a chronology around the 10th and 14th centuries CE. The Dawuhan site was produced dating around the 7th and 8th centuries CE. This is of course interesting if the correctness of the dating can be confirmed. The Banyuwangi megalithic culture can be linked to the Gilimanuk megalithic culture in Bali which dates to the 2nd century CE (Prasetyo 2000).

CONCLUSION

The megalithic culture at the Mulyosari Site lasted from the 2nd century CE to the 6th century CE. These periods were the transition from the prehistoric period to the Hindu-Buddhist period in the archipelago. If it is connected with the megalithic tombs in Gilimanuk, then the existence of the Mulyosari site shows a correlation, namely in the 2nd century CE. Likewise, if it is connected with megalithic sites around Banyuwangi. Dating analysis conducted at the Krajan site, Bayemen (Situbondo) shows that the megalithic sites in Situbondo took place in the 5th to 10th centuries CE.

The results of the dating of the megalithic sites in Gilimanuk and Situbondo lead to the allegation that megalithic culture took place continuously, starting from Bali to the east, namely Banyuwangi, to Jember, Situbondo, Bondowoso, Lumajang, and Probolinggo. This assumption is the initial basis for knowing how the megalithic culture took place at the eastern tip of Java Island and the characteristics of the megalithic remains and their landscapes.

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