



KEYWORDS: 'Kite' motif – Tradition – Cave art – Relative chronology – Ethnography

PRESUMED KITE MOTIFS IN KABORI CAVE COMPLEX AND THE CULTURAL TRADITION OF MUNA ISLAND, INDONESIA

Lutfi Yondri, Een Herdiani, Firmansyah, Akhmad Marhadi,
Rahmat Sewa Suraya and Kustini

Abstract. The debate about the age of the traditional 'kite' motif in rock art at Kabori Cave Complex is controversial because it has been considered earlier than the evidence for kites found in China. The Muna people still preserve the kite traditions. The similarities and differences between the kite forms found in cave, cliff, and niche paintings in the Kabori Cave Complex and those practised by the Muna people are examined. The kite motifs in the paintings are simple shapes made from a piece of leaf, called the *katimboka*, and a framed kite is called *kaghati kolope*.

Introduction

Rock art is one of the oldest and most widespread cultural traditions worldwide. It is essential data in studying the human past; it can tell us something about the symbolic expression and concerns of the people who created it. Rock art is a form of visual expression from past cultures, applied on the surface of cave walls, niches, and cliffs. The objects depicted are diverse, 'animal' motifs, 'humans' and their 'activities', 'boats', 'kites', kinds of 'sea animals', and the 'sun and moon'. Many issues regarding cave painting motifs have been widely discussed and have not been fully explored, but it is estimated that only a portion of them has been uncovered (Brumm et al. 2017; Pasaribu and Permana 2017; Oktaviana et al. 2024; Fauzi et al. 2019; Reepmeyer et al. 2016; Paterson and Veth 2020; Wattimena et al. 2020).

Rock art is found in many parts of the world, including the Kabori Cave Complex. It is located near Liang Kabori (administrative name) Village, Lohia District, Muna Regency, Southeast Sulawesi Province, Indonesia, and is a famous archaeological site complex with cave paintings. These cave paintings have attracted the attention of researchers because they seem to depict various human activities such as farming, raising livestock and hunting (Rasyidu et al. 2021), and ritual activities related to belief systems (Kosasih 1987 in Bernadeta 2011; Alamsyah 2014; Jusoh et al. 2017; Leihitu 2020; Sope 2023). In addition, these paintings also represent the artistic ability and creativity of the ancestors of the Muna Tribe, who can capture important moments in visual form. Applied

to the walls of caves or rocks, this is an aesthetic expression and describes their experiences, struggles and life expectations (Herdiani et al. 2024). The latest field research (July to August 2024) added caves that have painting remains in the Kabori Cave Complex. Data collection by previous researchers (until 2023) documented 43 locations. The latest research increased the number to 48 locations.

The caves at Liang Kabori village have been found to contain various figurative and non-figurative motifs (Rasyidu et al. 2021; Rahmawati 2024). The motifs include 'human' figures, 'animals', and other recognisable forms, while the non-figurative motifs consist of geometric and abstract designs (Rasyidu et al. 2021). The placement and patterns of these motifs in the caves have been analysed to understand the prehistoric inhabitants' artistic expressions and their cultural significance (Rahmayani et al. 2023). The colours used in cave paintings, such as red, black, and white, also hold symbolic meanings and are associated with spiritual practices (Leihitu 2013, 2020).

The motifs of rock paintings found in the Kabori Caves Complex are part of a larger network of regional pre-Historic sites on Muna Island, Sulawesi (Rahmayani et al. 2023). These sites showcase a variety of themes and artistic expressions that may provide insights into the lives and beliefs of ancient societies. The cave paintings in Kabori complex are a valuable source of information for understanding the cultural heritage and artistic traditions of past communities in the region (Tang et al. 2020). The figurative and non-figurative motifs may provide a glimpse into

the ancient inhabitants' symbolic language and spiritual beliefs, underscoring the significance of these archaeological sites in preserving and interpreting (Sope 2023). Therefore, its preservation is considered a high cultural value as this cave painting heritage is vulnerable to various events and dynamics that can destroy rock art (Zerboni et al. 2022).

The cave paintings in the Kabori Caves Complex have been a subject of interest in archaeological studies, particularly the presumed kite motifs. Based on the literature, it can be concluded that kites have become part of the world's great traditions. They were found in Indonesia as well as in various parts of the world. The opinion that the kite motif is found in the Kabori complex is the background of this article. Therefore, the issue of 'kite' motif distribution, shape, type and age in the Kabori Cave Complex is still an interesting topic to discuss, especially regarding the estimated age of the 'kite' motif in Liang Sugi Patani as a part of Kabori cave complex which is said to be much older than the age of the kite in China, estimated to be 2400 years, while the age of the earliest 'kite' motif in the Kabori complex has been suggested to be more than 4000 years.

Although this article does not discuss the absolute age of 'kite' motifs laboratory dating, it will try to discuss the age of 'kite' culture from an archaeological perspective, and the relative age of 'kites' can be estimated. This article also discusses 'kite' motifs found in the Kabori complex in various forms in the Muna community. It turns out that in the daily life of the Muna people, the form of *kaghati kolope* is called *bhangkara*, *Sopi fotu*, which is the result of stringing *kolope* leaves, and *manu-manu* or *katimboka*, which is made from *katimboka* leaves.

Method

This study uses a descriptive-explanatory method supported by a qualitative approach (Creswell 2013, 2014). Through this method, the first step of research is focused on collecting systematic and accurate data on the motifs of paintings in the Kabori Cave Complex. Data analysis uses photos and field records from July to August 2024 in 48 locations. In addition, an explanatory approach (Patton 2014; Yin 2018) is used to understand the symbolic meaning and social function of the paintings in the cultural context of the Muna community.

In-depth interviews with local community leaders and art practitioners provided valuable insights, linking visual representation in paintings to oral traditions and cultural practices that persist today. The themes and shapes of Liang Kabori's paintings were also presented using the descriptive-explanatory method, which clarified their relationship to Muna society's ongoing kite-flying tradition. The motifs are identified, categorised, and analysed according to their shape, composition, and assumed symbolism. Their relevance to the local community's customs and be-

liefs is then explained. It is anticipated that the Muna people's long-standing cultural legacy is reflected in the cave paintings. It will be preserved and evolve into a custom.

Rock art in Kabori Cave Complex

Research conducted during the July-August 2024 period succeeded in adding inventory data on caves (*liang* in the local language), niches, and cliffs that have painting remains in the Kabori Cave Complex. It was based on information obtained in the field of the 36 locations successfully recorded by the Regional Cultural Preservation Centre since 2014. When consulting the data provided by Sope (2023), it appears that the documentation of cave painting findings in the Liang Kabori area began in the 1980s (Kosasih 1982, 1984, 1987; Bernadetta 2006, 2011; Octo et al. 2023). These data seem to have been updated by Sope in 2023 by re-documenting the variety of paintings. At that time, Sope documented 43 locations where paintings remained, in the form of 'kite' motifs, 'humans', 'animals', geometrics, handprints, 'boats', and some paintings that were already difficult to recognise, classified as unidentified motifs (Sope and Mahirta 2023). It cannot be denied that the recent data is interesting to review and re-document because it is possible to find other things that were not observed or missed. One example is the observation of 'kite' motifs, which is the focus of discussion in this article. The 'kite' motifs by Sope (2023) are only found in five locations: in Metanduno, Kabori, Pominsa 1, Sugi Patani and Maarewu.

Research in 2024 aimed at tracing the history of the symbolic artistic civilisation of Muna culture, trying to record and re-document all locations both by the Cultural Preservation Centre of Region XIX, as well as data by Sope (2023). From the updated documentation of 43 locations, it turns out that the 'kite' motif is not only found in five caves. In addition to updating the distribution of 'kite' motif findings, research in 2024 also succeeded in adding rock art locations in the Kabori Cave Complex. The discovered sites were recorded as Liang BRIN Lansarita 1, Liang BRIN-Lansarita 2, Tebing BRIN-Kainsiteru, Liang BRIN-Waano 2, and Tebing BRIN-Lakantobe. The addition of the newly found locations can be seen from the map of the distribution of cave, niche and cliff findings comparing data from the South and Southeast Sulawesi Cultural Preservation Centre (of 2014), data made by Sope (2023), and additional new data from the RIIM Expedition Research Team (of 2024) (Fig. 1) as follows.

Result and discussion

In Table 1, RIIM Expedition Research Team Tracing the Historical Trace of Symbolic Fine Arts of Muna Culture in 2024 can show updated data and motifs of the cave paintings in the Kabori Cave Complex, both conducted by the South and Southeast Sulawesi Cultural Heritage Preservation Centre in 2014 and by Sope (2023).

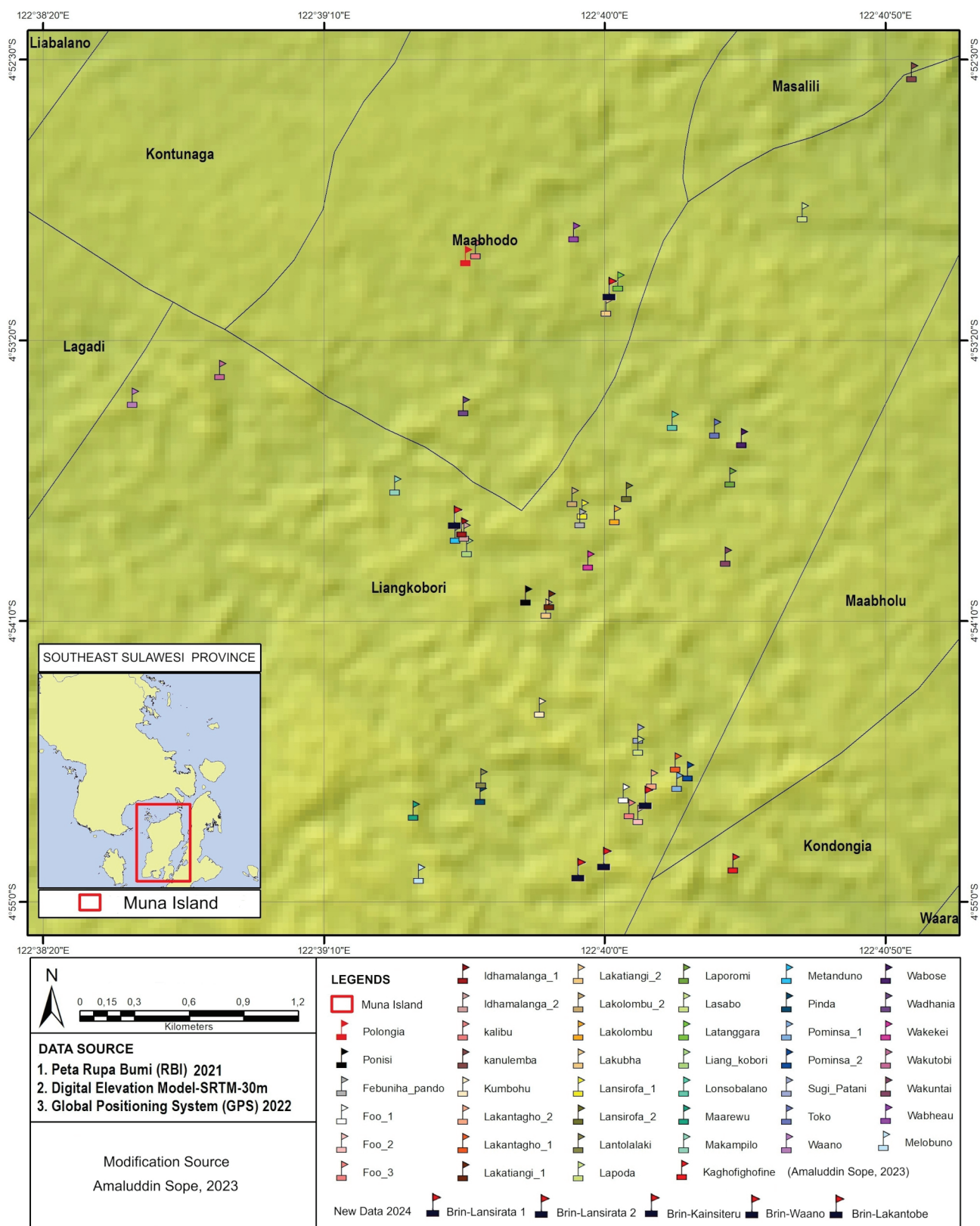


Figure 1. Distribution of cave, shelter, and karstic wall with rock art motifs at Kabori Cave Complex (modification A. Sope 2023).

'Kite' (kaghati) motifs in Kabori Cave Complex

The first discovery of a 'kite' motif was made by La Hada in 2005 while searching for wood in the Liang Sugi Patani area. At that time, he reported that he had seen a painting that resembled a person playing with

a kite, with the 'person' at the bottom and a 'kite' at the top, connected by lines. He assumed this was how the Liang Kabori and the Muna community played kites. The local people call the kites *kaghati*. This motif was documented by Wolfgang Marshall and Markus

No.	Site	Motifs							
		‘Man’	‘Animal’	Geomet- rics	Hand	‘Boat’	‘Kite’	‘Plant’	Unidenti- fied
1	Metanduno	v	v	v	v	v	v	-	v
2	Idha Malanga 1	v	-	v	-	-	-	-	v
3	Idha Malanga 2	v	v	v	-	-	-	-	v
4	Ponisi	v			-	-	-	-	v
5	Lakatiangi 2	v	-	-	-	v	-	-	v
6	Lakatiangi 1	v	-	-	-	-	-	-	v
7	Kabori	v	v	v	v	v	V (2024)	-	v
8	Kaghofigofine	v	v	v	v	v	v	-	v
9	Pominsa 1	v	v	v	v	v	v	-	v
10	Pominsa 2	v	v	v	-	v	-	-	v
11	Lakantago 1	v	v	v	-	v	-	-	v
12	Foo 3	v	-	v	-	V (2024)	-	-	v
13	Foo 2	v	-	v	-	-	-	-	V (2024)
14	Foo 1	v	v	v	-	v	-	-	v
15	Lakantago 2	v	v	-	-	-	-	-	v
16	Lapoda	v	-	-	-	-	-	-	v
17	Sugi Patani	v	V (2024)	v	-	-	v	-	v
18	Kumbohu	v	v	v	-	v	-	-	v
19	Wakuntai	v	-	v	-	-	V (2024)	-	v
20	Laporomi	v	V (2024)	v	-	-	-	-	v
21	Toko	v	v	v	v	-	V (2024)	-	v
22	Wabose	v	v	v	v	-	-	-	v
23	Lakubha	v	V (2024)	V (2024)	-	V (2024)	-	-	v
24	Latanggara	v	-	V (2024)	-	-	-	-	v
25	Wabeau	v	v	v	-	v	-	-	v
26	Lasabo	v	v	V (2024)	-	V (2024)	-	-	v
27	Melabuno	v	v	v	-	-	-	-	v
28	Maarewu	v	v	v	-	v	v	-	v
29	Pinda	v	v	v	-	V (2024)	-	-	v
30	Lantolalaki	v	v	v	-	V (2024)	V (2024)	-	v
31	Wakekei	v	v	-	-	-	-	-	v
32	Lakolombu 2	v	v	-	-	-	-	-	v
33	Lakolombu 1	v	v	v	v	v	-	-	v
34	Lansirofa 1	v	v	v	-	-	-	-	v
35	Lansirofa 2	v	-	v	-	-	-	-	v
36	Febunia Pando	v	v	-	-	-	-	-	v
37	Kanulemba	v	v	v	-	-	V (2024)	V (2024)	v
38	Waano (1)	v	v	-	-	-	-	-	v
39	Wakotubi	V (2024)	v	v	-	V (2024)	-	-	v
40	Kalibu	v	v	v	-	v	-	-	v
41	Ladhaniha	v	v	-	-	-	-	-	v
42	Makampilo	v	v	v	-	-	V (2024)	-	v
43	Lonsobalano	v	v	v	-	-	-	-	v
44	BRIN-Lansarita 1	V (2024)	-	-	-	-	V (2024)	-	V (2024)
45	BRIN-Lansarita 2	V (2024)	V (2024)	V (2024)	-	-		-	V (2024)
46	BRIN-Kainsiteru	V (2024)	V (2024)	V (2024)	-	-	V (2024)	-	V (2024)
47	BRIN-Waano 2	V (2024)	V (2024)	V (2024)	-	-	-	-	V (2024)
48	BRIN-Lakantobe.	V (2024)	V (2024)	V (2024)	-	-	-	-	V (2024)

Table 1. Sites, painting motifs and their distribution in the Kabori Cave Complex.

No.	Site	Year	'Kite' motifs and colours					
			Kaghati kolope			Manu-manu/Katimboka		
			Red	Brown-ish-red	Black	Red	Brown-ish-red	Black
1	Metanduno	1970	v					
2	Kabori	2024	v					
3	Kaghofigofine	2016	v		v			
4	Pominsa 1	2014	v		v	v		
5	Sugi Patani	2014	v					
6	Wakuntai	2024	v					
7	Toko	2024			v			
8	Maarewu	2017	v	v	v			
9	Lantolalaki	2024	v					
10	Kanulemba	2024		v				
11	Makampilo	2024	v					
12	BRIN-Lansarita 1	2024				v		
13	BRIN-Kainsiteru	2024	v					
14	BRIN-Lakantobe	2024	v			v		

Table 2. 'Kite' motifs and their distribution at Kabori Cave Complex.

Walfer (2012).

The 'kite' motif at Sugi Patani became the benchmark for 'identifying' kite motifs in the Kabori Cave Complex by La Ode Rivai, La Ode Lansirata, and La Ode Darma at Pominsa I, Maarewu, Kaghofigofine and Liang Toko (Sope 2023).

The *katimboka* motif was not identified until the 2024 research, conducted during the review of Liang BRIN-Lansirata I with La Ode Lansirata and La Ode Darma. It is said that motifs like *katimboka* leaves, which are usually played by local children when they accompany their parents to work in the garden. After confirming with the local community, they said that they used *katimboka* leaves as kites when they were

young. Based on this information, 'kite' motifs were identified. Previously, only five sites were recorded; in 2024, 14 sites with 'kite' motif paintings were identified (Table 2).

In the Muna community, the *kaghati* (kite) is made using *kolope* leaves woven or connected one by one, so the kite is called *kaghati kolope*. *Kolope* is a type of vine tuber from the genus *Dioscorea*, sp. *Kolope* plants have three leaves on one stalk. For the Muna community, the three leaves on one *kolope* stalk are said to symbolise gender balance, namely male and female. The kite frame is made from bamboo (*patu-patu*), and the string is made from old pineapple leaves (*ghur-*

ame), which are then stored for two days before being processed to extract the fibre. One piece of a forest pineapple leaf can produce 10 m of rope.

The *kolope* leaf consists of three parts. The centre part is the largest, while the leaves on the left and right are small and usually the same size. The Muna people consider the *kolope* leaves a symbol of men and women. The leaves in the centre symbolise men, while those on the left and right represent women. The Muna community believes a man must be fair and not one-sided in life. Therefore, the large leaves of the *kolope* must always be placed in the centre and not confused in their position. If the places are changed, the kite becomes unbalanced, tends to spin, and when it is flown, it cannot stay up for a long time.

The placement of these leaves when woven in *kaghati* is separate. Each *kolope* leaf is woven one by one, using thinned bamboo slats. It can be noted that the making of the *kaghati kolope* in the Muna community is simple, as is the string used to fly the *kaghati kolope*. The string is made from forest pineapples and spun into a rope (Banara and Sifatu 2019). The diameter of the rope made from pineapple fibre is proportional to the size of the *kaghati kolope* that will be flown. When the *kaghati kolope* is flown, it produces a sound. The sound depends on the size of the *kamumu* tied to the top of the *kaghati*. To the local community, the sound



Figure 2. (a) Form, material and people in playing *kaghati kolope*; (b) *kamumu* or *kamuu* (documentation by LY, 2024).

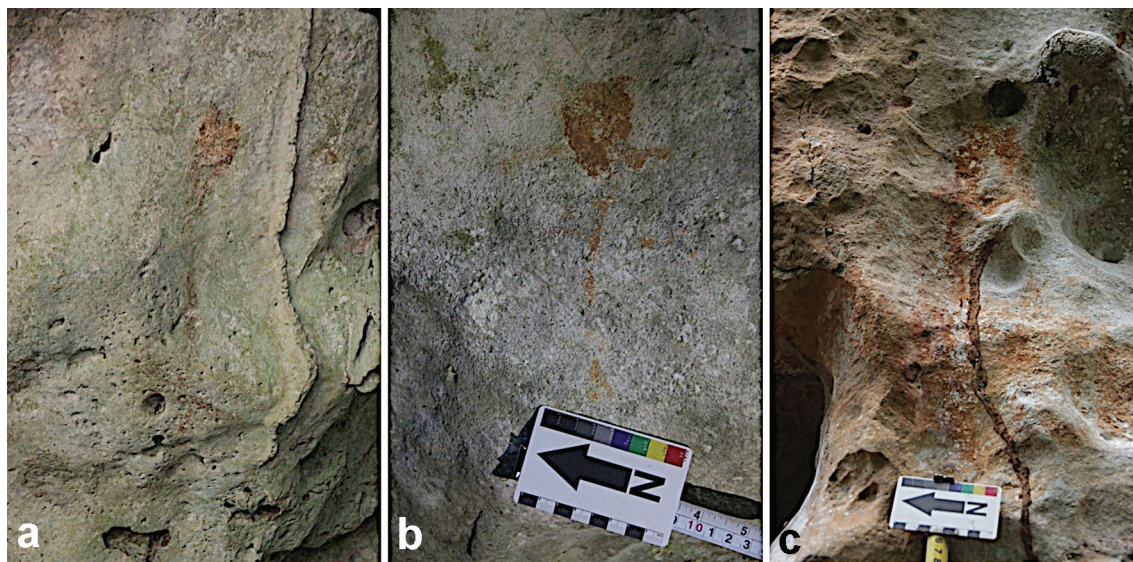


Figure 3. (a) 'Playing kite' motif at Liang Sugi Patani; (b) Liang Pominsa 1; (c) BRIN-Lakantobe (documentation by LY, 2024).

maker is *kamumu* or *kamuu* (Sifatu et al. 2020). The *kamumu* itself is made of a single bamboo blade used to tie palm leaves (Tirayoh 2019) (Fig. 2a, 2b). Local people use the sound of *kamumu* or *kamuu* paired with this *kaghati kolope* to ward off crop pests, one of which is pigs.

Motifs of flown *kaghati kolope*

Kaghati motifs being flown or people playing 'kites' in the Kabori complex are found in the form of *kaghati* images connected by ropes or strings to 'human' motifs at the bottom, like people flying kites, as found in Liang Sugi Patani and Pominsa 1 (Fig. 3) or only in the form of *kaghati* motifs connected by ropes in a vertical position with *kaghati*, as found in Liang Kanulemba (Fig. 4a). This motif resembles how the Muna people fly the *kaghati kolope* today. The *kaghati* they make all come from plants around them. They use bamboo to make the *kaghati* frame and weave one *kolope* leaf at a time using bamboo that has been thinly

whittled. The rope used to fly the *kaghati* is made of forest pineapple fibre.

The depiction of *kaghati kolope* is in the position of being flown. Its form, thread or rope, and the person who plays it are depicted in red. This is from the *kaghati* that are not being flown, or only the *kaghati kolope* motifs. It was displayed in two types of colours, namely red and black, as found in Liang Toko, Liang Kaghofigofine, Liang Marewu and Liang Lantolalaki (see Table 2).

The 'kite' motifs in the Kabori complex are red, brownish-red and black. The red, red-brown and black motifs are found in locations such as Liang Pominsa 1, Maarewu. Still, there are also those depicted using only one colour, such as the *kaghati* motifs found in Liang Sugi Patani. The *kaghati* motifs in Liang Pominsa 1 are shown in red and red-brown colors, including the 'kite' motif with ropes. The rope or string connects the 'human' motif with *kaghati* like a person flying a kite in Liang Sugi Patani, Liang Pominsa 1 and Liang

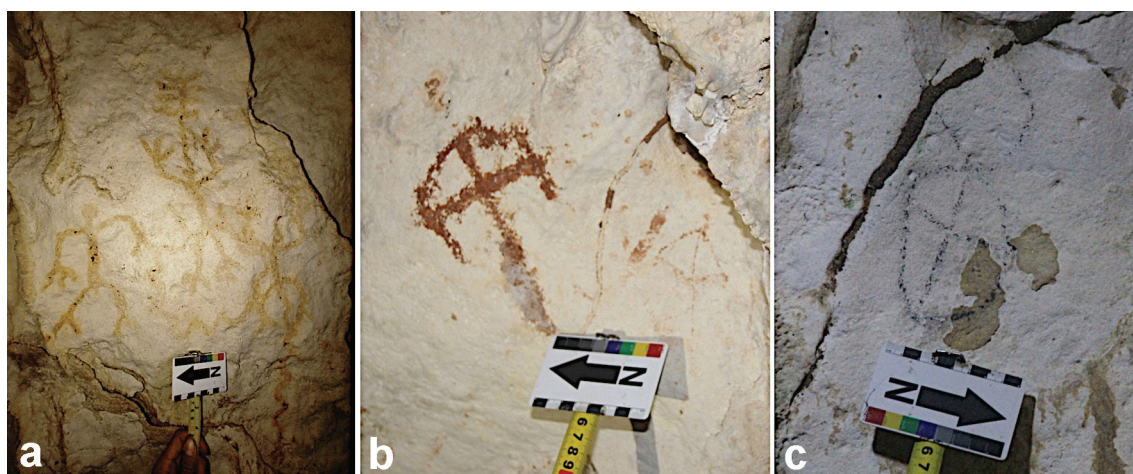


Figure 4. (a) 'Kite' with three 'men' and 'plant' motifs in Liang Kanulemba; (b) 'kite' in swirling position motif in Liang Pominsa 1; (c) 'kite' motif in black colour in the Toko Cave (documentation by LY, 2024).



Figure 5. (a) Katimboka (kite) motif in Liang Pominsa 1, (b) and Liang BRIN-Lansirata (documentation by LY, 2024); (c) katimboka in Thousand Islands (Kepulauan Seribu), early twentieth century (Sailors 2013).

BRIN-Lakantobe (Fig. 3a, 3b, 3c).

Another depiction of *kaghati* motifs is with the rope or thread upright, without 'human' motifs associated, or with three human and plant motifs (flower shapes such as corn plants). This motif is found in Liang Kanulemba (Fig. 4a), and the depiction of the *kaghati* motif with the position of the string is as if it were broken. The rope or thread connected to the *kaghati* is depicted swirling in the air, as found in Liang BRIN-Lakantobe (Fig. 4b). The black *kaghati* motif, on the other hand, is generally found only in the form of a depiction without the rope/thread and human motifs in Toko cave (Fig. 4c). In contrast to *kaghati kolope*, another 'kite' depicted in the Kabori complex is made from a single leaf, referred to by the local community as *manu-manu-katimboka*. This motif is shown using red. The most recent findings of this motif in the Kabori complex were found in Liang BRIN-Lansirata 1 and Liang Pominsa 1. Now, played by some children on Muna Island, and even adults can easily recount their childhood when looking at the *katimboka* leaves (*Drynaria* sp.) to make kites (Fig. 5).

Kaghati and hoping for the afterlife

Based on interviews with the local community, it was found that in the cultural traditions of the Muna people, there is a magical belief related to *kaghati kolope*, which they fly and then deliberately break, relating to the hope for life after death. This custom is said to be enacted when an extraordinary plague disrupts the harvest.

For the ritual, four chicken eggs and four *ketupat* or *lapa-lapa* (a traditional Muna food made from rice wrapped in young coconut leaves and tied with plant fibre ropes) are tied as a funeral gift at the bottom of the vertical frame of the *kaghati*. The *kaghati kolope* is not flown on any day but on a Friday night, which is considered most sacred by the local community. Accompanied by prayers, the *kaghati* is released to fly for seven days and seven nights.

we consider the length of time the *kaghati kolope* flies with the heavy load tied to its tail, a small *kaghati kolope* cannot carry the funeral gift. A small *kaghati* cannot fly for a long time because it is vulnerable to changes in the wind. Therefore, they made a large *kaghati kolope*. Based on observations of the kite festival activities on 30 July 2024, the *kaghati kolope* they flew was almost 5 m high, with a span of more than 2.5 m wide at the top. The large *kaghati kolope* is likely related to the hope of life after death because the large *kaghati kolope* can carry the described funeral gift tied under its frame. The *kaghati kolope* is flown for days and nights; then, the rope will be cut or removed. They believe that the *kaghati kolope* will carry their spirits to eternity, and that will be their toy in eternity. The hope of life is symbolised through *kaghati kolope*, recorded in the rock art motifs in Liang Kaghofigofine (Fig. 4b).

Motifs of catching fish using a kaghati

Besides being used for games carried out by flying, in the Muna community, based on interviews with local people, kites were also used for fishing in the sea. Nowadays, this activity is no longer practised, and the way of catching fish is changing with the introduction of more modern technology. Based on the results of the search for literature sources, fishing at sea using kites was not only done by the Muna community. Several fishing communities in Ternate were documented around 1893, in Maluku in 1899 (Dietrich 2012), and Polynesian (Chadwick 1931) and Hawaiian traditions existed (Sailors 2011). Dietrich described the kite tied with a rope connected to a hook, the boat rowed to make the kite fly, and the movement is likely to attract fish to chase the bait. Presumably, when the fish is hooked, it will descend and pull down the kite. This is likely to be a sign for the fisherman that the fish is hooked (Fig. 6).

The motif of 'people fishing using kites' is also found in the Kabori Cave Complex. This motif was found in Pominsa 1; until now, it is still the only

such motif in the cave complex. The motif seems to depict a person on a boat; in front of the person's motif is depicted a 'kite' (*kaghati*), connected by a thread/rope that functions as a fishing line (Fig. 7). Meanwhile, at the end of the rope submerged in the water, a fish motif is depicted as if it has been caught on the hook.

Determining the chronology of 'kite' motifs in the Kabori Cave Complex

The dating of 'kites' in the Kabori Cave Complex is still debated. The 'kite' motif used as the beginning of the age interpretation is the 'kite' motif found in Liang Sugi Patani. Salikha (2018) states it was observed by Wolfgang Bieck in 1997 and mentioned the world's first kite, older than Chinese kites of about 2400 years.

According to Sailors (2013), the most accepted theory on the kite's invention is posited by the sinologist Joseph Needham, who claims that the kite's creation is of Chinese origin. He suggests that the earliest written accounts of kite-flying are those of Gong Shuban, who lived in the State of Lu somewhere between 722 and 481 BCE and was observed constructing a 'sparrow-hawk' type of kite that was used for military purposes of measurement (Needham and Ling 1971: 929). Sometime in the centuries following Christ, the kite spread from China to neighbouring coastal states and insular Southeast Asia and then was eventually traded to the Mediterranean region in the West and into the Pacific Island region in the East. Finally, the kite found its way to Europe by the 16th century when Portuguese merchants returned from the Orient and eventually to the Americas and elsewhere with European colonists in the centuries, leading to global modernity as we know it (Hart 1982).

Based on this description, the kite paintings found in Indonesia, particularly in the Kabori complex, are strongly suspected to be of a younger chronology. This seems to correlate with Noel Hindalgo Tan's conclusion that cave paintings found in Indonesia are closely related to Austronesian culture (Tan 2016). It should be recognised that modern dating methods for measuring cultural chronology are now emerging that do not use material from the culture to be dated. If not properly calibrated archaeologically, this may result in biased dating and may be older than the cultural object. Of course, this must also be done carefully, including when dating the cave painting culture in the Kabori Cave Complex.

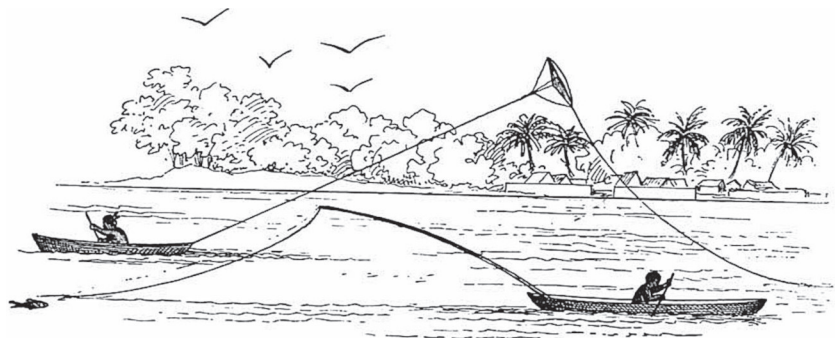


Figure 6. The first nineteenth-century depiction of a kite fishing scene was published in 1893. After Wawn, *South Sea Islanders* (Dietrich 2012).



Figure 7. 'Kite-fishing' activity depicted in Pominsa 1 (documentation by LY, 2024).

Archaeologically, in our opinion, determining the age of a cultural product in the past must have four criteria related to matrix, placement, association and context. In this case, the samples for dating analysis must come from the same matrix, provenience, and association, and have a context for the object whose age is sought in the laboratory. The material samples of *kaghati* motifs in the Kabori complex are difficult to use as dating samples because they did not meet the minimum sample limit. If the material were taken, it would damage the motif of the painting itself.

To determine the age of the *kaghati* motifs in the Kabori complex, it is better to do so through relative chronology by analysing the forms of cultural products depicted in a matrix, provenience, association, and context with the *kaghati* motif. The motifs of objects are easy to recognise in the Kabori complex, including presumed weapons, both depicted as being held by 'human' motifs, and 'weapon' motifs placed at the waist of 'humans'. It can be noted that the placement of 'kite' motifs (*kaghati* and *katimboka*) in each recess, niche, and cliff in the Kabori complex is generally shared with human motifs holding presumed metal weapons, *kapulu* or *tobo*. The existence of

objects made of metal in the diachronic cross-culture in the archipelago began to be known or produced in the palaeo-metal era, developed rapidly in the proto-Historic era, and even in the Historical era, which was marked by the existence of a traditional weapon-making industry by communities in various regions in the archipelago. The tradition of making weapons is continuing in West Muna.

Based on the relative analysis of 'kite' motifs (*kaghati* and *katimboka*) in the Kabori complex, their oldest chronology can be tentatively proposed as deriving from the palaeo-metal era or the younger proto-Historic era, as none of the archaeological remains are associated with written artefacts.

Another way to determine the relative age of the *kaghati* and *katimboka* motifs in the Kabori Cave Complex is to search for containers used for painting materials, whether they are of stone media, pottery, bones, shells, or natural materials that show traces of paint substances used to create paintings in the past.

Conclusion

'Kite' motifs found in caves, niches, and on cliffs in the Kabori Cave Complex are quite varied. Some are single-leaf (*katimboka*), and some seem to be depicted using a frame (*kaghati*). The 'kite' motifs are being flown complete with depictions of 'human' motifs connected by lines to the 'kite', 'kites' with tied objects and 'strings' that are not perpendicular.

The 'kite' motifs are depicted in red, brownish-red, and black colours. The depiction of the 'kite' motif in the Kabori Cave Complex is not singular; it is in a matrix, provenience, association and context with other motifs such as zoomorphs, 'boats' and motifs of 'people' holding 'weapons' in the form of 'flat-shaped machetes' which are not only held but also depicted tied around the waist of the 'person' motif. The weapon and the technology of making this weapon can be used as data for determining relative chronology because direct dating is quite difficult to do. The 'kite' motif dates can be estimated from the Palaeo-metal era until the Historical era.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Dr Lutfi Yondri

Research Center for Prehistoric and Historical Archaeology
National Research and Innovation Agency, Indonesia
Email: yondrilutfi@gmail.com, ORCID: 0000-0002-0310-250X

Dr Een Herdiani

Institute of Arts and Culture Indonesia

Bandung, Indonesia

Email: eenherdiani@yahoo.com, ORCID: 0009-0003-6804-7905

Dr Firmansyah

Faculty of Cultural Science, Halu Oleo University

Southeast Sulawesi, Indonesia

Email: firmanfirmansyah985@gmail.com, ORCID: 0009-0004-2088-092X

Dr Akhmad Marhadi

Faculty of Cultural Science, Halu Oleo University

Email: mhat_suraya@yahoo.com, ORCID: 0000-0002-1370-6331

Dr Rahmat Seva Suraya

Faculty of Cultural Science, Halu Oleo University

Email: ajie_np@yahoo.com, ORCID: 0009-0000-6266-2294

Dr Kustini

Research Centre for Religion and Belief

National Research and Innovation Agency, Indonesia

Email: kustinikosasih20@gmail.com, ORCID: 0000-0002-2439-4791

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