THE HISTORY OF THE BUGIS LONTARA CALENDAR OF SOUTH SULAWESI

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Abstract:
A calendar is the accumulation and distribution of time with specific time units based on events that people worldwide use to guide time. The Bugis tribe in South Sulawesi-Indonesia owns the Bugis calendar. It is a cultural heritage and existed before Islam entered there. Using bibliographical data and being descriptive-analytical, this article aims to add to the treasury of astronomy studies, especially for the Bugis people and become a reference for the Lontara Bugis calendar. This article finds that the Lontara Bugis Calendar has adopted the Hijri calendar but does not necessarily abandon the culture or ancestral beliefs regarding the Lontara Bugis calendar.

Keywords: Lontara Calendar, Bugis Astronomy, History of the Bugis Calendar

Abstrak:

Keywords: Astronomi Bugis, Sejarah Penanggalan Bugis
A. Introduction

Human life cannot be separated from the change of time. Therefore, for the sake of better survival, humans make a calendar, which is a system of organizing time units as a marker and calculating time in the long term. Another name for the calendar is the almanac. The use of calendars in human life actually originated from astronomical or astrological activities that were often carried out by humans thousands of years ago.\(^1\) It was human observation at the time of outer space and astrology that later inspired several tribes in the world to produce a calendar system. This calendar system is used by many ethnic groups to predict climate and natural conditions which then affect the agricultural and marine systems in the area.\(^2\)

Of the various kinds of calendars that exist in this world, it consists of three calculation systems, namely solar calendars, lunar calendars, and lunisolar calendars.\(^3\) First, the Almanac of the Solar system (Solar System or Syamsiyah) in principle, this system is a calendar system that uses the Earth's journey when it evolves or orbits the Sun. There are two considerations used in this system. The first is the change of day and night. The time it takes for the earth to revolve around the sun is 365 days 5 hours 48 minutes 46 seconds. Second, an almanac that uses the lunar system (Qamariah/Month) in principle this almanac uses the lunar system, meaning that the moon travels when it orbits the earth (evolves around the earth). This almanac purely uses lunar because it follows the phases of the moon. The lunar system calendar, on the other hand, is not affected by the changing seasons. Because the appearance of the moon in one year for twelve times is very young to be observed. The moon's rotation speed is not the same, sometimes it can be reached in 30 days and at other times 29 days. The total rotation period of the moon around the earth is 354 days 48 minutes 34 seconds. Among the almanacs or calendars that use the lunar system are the almanacs or the hijri calendar (Islamic/Arabic). Third, an almanac that uses the lunisolar system, namely a calendar that combines the movement of the moon around the earth

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with the apparent annual movement of the sun for month and year calculations. Normally, this calendar consists of 12 months with 29 or 30 days, 354 days in one year. This number is 11 days earlier than it should be because the calculation of the year in this calendar is by using the calculation in the solar calendar system, which is 365 days. So, to adjust the number of days with the movement of the sun in one year, a leap year or an alternate year is made, which consists of 13 months 7 times in 19 years. The calculation system is the change of months in the calendar based on the synodic cycle of the month, and to synchronize with seasonal adjustments, there will be added days in each particular month, or added months in a certain year range.\(^4\)

Nowadays, the calendar that is widely used by most people is the Christian calendar (Solar Calendar). Meanwhile, the Hijri calendar (Lunar Calendars) is only used by several Muslim countries in the Middle East. Even in Indonesia using the Christian calendar (Solar Calendars) in state administration.\(^5\) Some countries such as China, Japan and India have their own calendar or calendar system, but in state administration they still use the Gregorian calendar. In addition to China, Japan and India, which have a calendar system that is still used today.\(^6\) Likewise, the Bugis tribe in South Sulawesi has a traditional calendar system using the Lotara Bugis calendar.

Scientifically, the calendar system is a form of knowledge about solar system objects and celestial bodies as a system that is related to one another. This kind of calendar system is usually known as astronomy and astrology. In its history, this kind of calendar system explains the relationship between humans and the universe. The calendar system in the Bugis ethnic community is basically related to aspects of people's lives, both the economy or the livelihood system, as well as social and political affairs in the past to the present.\(^7\)


\(^{5}\) Ahmad Izzuddin, Fiqh Hisab Rukyah Menyatukan NU dan Muhammadiyah dalam Penentuan Awal Ramadhan, Idul Fitri, dan Idul Adha (Jakarta: Erlangga, 2007), 56.


Efforts to revive the calendar system to find out all forms of calendar or calendar guidelines related to aspects of the activities of the people of South Sulawesi in general or the Bugis community in particular. That this is the initial form of bringing back the old has not been resolved with certainty and clarity. That the Bugis community has contributed a calendar system or calendar to world civilization. Therefore, this paper discusses the historical Bugis calendar.

B. Method

The research in this paper is a type of library research (Library Research) which describes systematically, normatively, and accurately the objects that are the subject matter. In this study the authors also used four research approaches. Ethnographic approach, in which this research is used to investigate a culture (Cultural Investigation) through a study approach (In-depth study). Studies conducted in an effort to understand the cultural family of a particular society. Second, the Historical Approach is an approach that describes past conditions in a systematic, objective, and accurate manner. Historical research data is obtained by describing records, artifacts, or other types of verbal reports. The results of the research are in the form of narrative descriptions, or analysis of past chronology. Third, is the Sociological approach, an approach based on life in society regarding navigation both in general in Indonesia and specifically in the Bugis community. Fourth, is the philosophical approach, research that uses intellectual analysis to clarify meaning, make values real, identify ethics, and even study the nature of science. Philosophical research is based on issues and ideas from all literary perspectives. Sources of data in this paper are primary data and secondary data. The data is then collected and systematized historical or historical Bugis calendar.

C. Result and Discussion

C.1 The Astrology on Bugis People

The Bugis people are a large Austronesian family who live in the southwestern part of Sulawesi Island with a population of more than four million people. As a result

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8 Nor Sidin, Bilang Taung System Penanggalan Masyarakat Sulawesi Selatan Berdasarkan Naskah Lontara, 4.
9 Suyitmo, Metode Penelitian Kualitatif: Konsep, Prinsip dan Operasional (Cet. I; Tulungagung: 2018), 89-90.
of its internal evolution and interaction with various external civilizations (China, India, Islam and Europe). For centuries, the Bugis have been one of the most obscure ethnic groups in the archipelago. Because little knowledge is spread about them, many think that the Bugis people were sailors from long ago. The Bugis people are basically farmers, and their maritime activities only really developed in the 18th century AD.10

The Bugis are a tribe belonging to the Deutero Malay tribes. Starting to enter the archipelago after the first wave of migration from mainland Asia, to be precise Yunan. The word "Bugis" comes from the word To Ugi, which means Bugis. The naming "ugi" refers to the first king of the Chinese kingdom located in Pammana, today's Wajo Regency, namely La Sattumpugi. When the people of La Sattumpugi named themselves, they referred to their king. They dub themselves as To Ugi or people or followers of La Sattumpugi. La Sattumpugi is the father of We Cudai and is related to Batara Lattu, the father of Sawerigading or the husband of We Cudai and gave birth to several children including La Galigo which is the largest literary work in the world with a total of approximately 9000 folio pages. Sawerigading Opunna Ware (Yang Tuan di Ware) is a story set forth in the literary work I La Galigo in the tradition of the Bugis people. So far, the Bugis are the most numerous community and are generally the strongest and most civilized ethnic group in Celebes (Sulawesi).11

Local writings written in ancient texts contain a variety of historical events and figures, in addition to the progress of society events that have provided depiction material to see the situation and conditions that occur in the present era, by understanding the chronology that occurred in the past. Ancient manuscripts are usually written in Lontara and become a source of socio-cultural information.12

Generally, the knowledge of the people of South Sulawesi about astrology is contained in Lontara texts, including the Kutika, Mapa bintang, and Pananrang scripts. The Lontara manuscript is important information about the track record of local

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11 Nor Sidin, Bilang Taung System Penanggalan Masyarakat Sulawesi Selatan Berdasarkan Naskah Lontara, 17.

The information contained in the *Lontara* texts shows how important all social aspects of life were in the past. *Kutika* is a prediction that contains good and bad times related to the activities of individuals or groups of individuals in the people of South Sulawesi. The forecast contains community activities or is believed to provide benefits. *Kutika* is a form of fortune-telling activity that aims to find out the good and bad times related to fortune-telling using a guide that contains instructions. The guide contains instructions in the form of notes, pictures, and calculations as well as explanations for each calculation and calculation results.

*Mab bintang* in Bugis or Bintang in Makassar is an arranged marriage. This type of kutika is generally used in the social life of the Bugis people. *Mastar* is a matchmaking calculation to look for possible future events. One of the motivations for marriage that is commonly found in Bugis society is arranged marriage. Mainly because of the view to strengthen family ties. *Pananrang* in the Bugis language comes from the word *Tanra* which means sign, which can be interpreted as informative knowledge based on reading the sign. This makes *Pananrang* a science of astrology which contains knowledge of celestial bodies including knowledge of the moon and sun. *Pananrang* refers to knowledge that contains information relating to something that has happened. These events relate to figures, community groups to natural events such as solar eclipses, lunar eclipses, earthquakes, and others.

In calculating time, the Bugis people are based on the circulation of the moon, such as calculating the Hijri calendar. The Bugis people believe that the circulation of the moon is a natural process which at any time has a mythological meaning that influences all human activities and is even believed to be *Pananrang*. *Pananrang* is used as a reference by the Bugis community in various activities in their daily lives so that it is written in the *Lontara* script which in ancient times became the language for all

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14 Nor Sidin, 3.
15 Nor Sidin, 3.
16 Nor Sidin, 215.
cultural activities of the Bugis people including calendars. Determining the initial entry of the month is done in several ways\textsuperscript{17}, including:

a. *Ma’palao Fuppu Esso*, that is, when the sun and moon set together, and after sunset, the start of the month is counted.

b. *Mappabhaja*, namely observing the moon in the east at dawn, before dawn by using a thin black cloth that is closed to the eyes, and if there are three horizontal lines, it is called Tellu Temmate which means, in three more days there will be a change of months, and when there are two horizontal lines, which means that two days rise at the beginning of the month.

c. There is lightning or drizzle in the middle of the night before the first turn of the month.

C.2 Bugis Navigation

The Bugis are one of the most famous seafaring peoples in Southeast Asia. Some claim that they have appeared. The southern peninsula of Sulawesi is the area inhabited by the Bugis people which is surrounded by the sea. To the west, there is the Makassar Strait which separates Sulawesi and Kalimantan. The Makassar Strait is connected to the Sulawesi Sea in the north which is bounded by the Philippine archipelago. While in the south, it continues with the Java Sea. While to the east, there is Bone bay which is connected to the Flores sea. The position of the southern peninsula of Sulawesi, especially the port of Makassar is very strategic. It combines Buton, Maluku, Nusa Tenggara and Papua in the east with Java, Kalimantan, Sumatra and the Malay Peninsula in the west. Connecting Bali to Australia in the south, with Toli Toli, the Philippines, Brunei, to China in the north.\textsuperscript{18}

Inter-island interactions carried out by the Bugis community have been massive in the past. Especially the conquest of Malacca by the Portuguese in 1511. It was at that time that the Makassar kingdom, in this case Gowa, developed as a trading port for the eastern archipelago. The Bugis kingdom developed its inter-island trade,


\textsuperscript{18} Nor Sidin, et.al. *Astrologi Kitab Ramalan Bugis Ramalan Makassar*, 101.
especially since the Makassar war was over. Several ports in South Sulawesi, such as the ports of Makassar, Pare-Pare, Tanete, Bajo Cenranae, Palopo and others have become ports that have been recorded as the history of the entry and exit gate for trade.¹⁹

Most of the Bugis people work as sailors in general so that in fishing activities the Bugis determine directions or navigational tools by linking to celestial bodies such as stars and the moon to find out when the tides and sea currents occur. A Bugis skipper or fisherman can memorize a calculation system that makes it possible to predict the time and water level during high or low tide.²⁰ The Bugis people have their own term for identifying the tides in classifying it. So that Bugis sailors also have their own guidelines in shipping activities, these guidelines are contained in manuscripts that read Lontara script. Therefore, the Lontara script was written down and became a guide in shipping activities to determine directions, times, and good and bad days in all other activities. The following is a description of the Lontara script based on how to determine the direction on certain days and months based on wind movements.

Figure 1. Kutika Anging Manuscript

¹⁹ Nor Sidin, 102.
In this manuscript, Matthes provides an explanation that Kutika Angin is often used by people who work as sailors to find out the weather every day of the month. So to avoid the problems that exist when sailing, people are guided by a manuscript called Kutika Angin. In addition to Kutika Angin which is used by the community in shipping, the community also refers to the type of Kutika Tanra Allopi-laping (Sailing Mark). In this Kutika, Matthes (1872) describes this Kutika as a guide way for Bugis Makassar sailors to know matters relating to shipping and this Kutika can be said to be a very important marker.21

Furthermore, Matthes (1872) gave an explanation of the kutika above that this Kutika was a guideline for meeting boats every day. Each number represents the date of each month. Then every sixth, eleventh and so on count back to its original position. In the past, Kutika was used as a guide, Bugis Makassar sailors could find out about meeting ships and be able to map sea lanes and land designs. Until now, navigation tools in the world of shipping such as radar, GPS (Global Positioning System) systems, and others have become easier.22

Apart from the Lontara Kutika, the Bugis people are also guided by one of the Lontara Kutika texts Allopi-laping Bilang characters kale (Kutika for calculating the body on a voyage). The use of Kutika is related to boats and items on boats. The naming of Kutika Allopi-loping says characterskale, based on calculations using pictures of the human body. Each number contains every part of the human body, totaling sixteen. How to use it by counting the parts of each body in the sixteen image. It is calculated according to what the user wants, then it returns repeatedly to the initial form or when it has not found the number point it is looking for.23

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21 Nor Sidin, et.al, Astrologi Kitab Ramalan Bugis Makassar, 102-105.
22 Nor Sidin, 106.
23 Nor Sidin, 107.
From the above manuscript, Matthes (1872) describes numbers starting from one to sixteen, and accompanied by Bugis terms. Matthews (1872) states that no further explanation was available to him. Except every number is indicating a date in the month.\textsuperscript{24}

The factor of changes in natural conditions, in this case the weather at sea, is often the main obstacle in shipping. Coupled with disturbances at sea such as Marauders (Pirates). Therefore seafaring related to knowledge of astrology (observation) and sea navigation is very much controlled by Bugis sailors. The great knowledge of the world of shipping is not in doubt, even Bugis sailors have the ability to know cartography. Several maps made by Bugis sailors that were found, became collections in several European museums and libraries. One of them is Boeginese Zeekaart (Bugis Map).\textsuperscript{25}

Some of the older sailors are familiar with the annual cycles of the stars and constellations, including the details of their appearance and disappearance, especially during the east monsoon when most of the voyage takes place. The Bugis people who work as sailors are already familiar with the science of astronomy in determining the

\textsuperscript{24} Nor Sidin, 109.
\textsuperscript{25} Nor Sidin, 101-102.
direction that uses the constellations as a reference or benchmark.\textsuperscript{26} For Bugis sailors, wind is a fundamental socio-economic aspect because it provides propulsion for their boats and limits the movement of fish, their staple food. Because the wind is the path of the boat, in sailing it is very important to be aware of the wind direction from minute to minute in order to anticipate changes that can occur. This requires in-depth knowledge of astronomy related to the phenomenon of shipping.\textsuperscript{27} It can be said that the Bugis people have understood the science of astronomy both in terms of determining the beginning of the month and in terms of navigation.

C.3 Bugis Calendar History

The cultural wealth of the Indonesian nation consists of various ethnic groups and one of them is the Bugis tribe which has a Bugis calendar or calendar. The term Bugis calendar or calendar is often mentioned in Bugis cultural treasures as "Bilang Patemmu Taung" or sometimes referred to in ancient texts as Kutika Bilange (ritual calendar) or Pananrang Ugi (Agricultural calendar). The Bugis calendar or calendar model in its historical span is very distinctive, unique and dynamic.\textsuperscript{28}

The Bugis calendar is the calendar used by the Bugis people in South Sulawesi. Besides being used by the Bugis tribe, some parts of this calendar are also used by the Makassar tribe. The Bugis calendar or Bugis calendar is a solar calendar or solar system in which the Bugis divide their year three hundred and sixty-five days into twelve months and start from the sixteenth of May (the Christian calendar). Bilang Ugi is a term or mention that refers to the month count used in Bugis society which consists of twelve months in brackets of one year. This Bugis saying is certain to have existed and was in force in South Sulawesi before the arrival of Islam or before the Bugis people became acquainted with Islam who immediately brought a calendar or Hijri calendar. Likewise with the arrival of Europeans who brought the Gregorian calendar.\textsuperscript{29}

\begin{thebibliography}{9}
\bibitem{AMMARELL2016104} Gene Ammarell, 	extit{Navigasi Bugis} (Makassar: Ininnawa, 2016), 104.
\bibitem{AMMARELL2016109} Gene Ammarell, 	extit{Navigasi Bugis} (Makassar: Ininnawa, 2016), 109.
\bibitem{Sidin} Nor Sidin, 	extit{Bilang Taung System Penanggulan Masyarakat Sulawesi Selatan Berdasarkan Naskah Lontara}, 13.
\end{thebibliography}
Raffles was a researcher from Europe who explained the Bugis calendar system in one of his books, The History Of Java (1817). The Bugis use twelve months in a year and it starts on May 14 on the Gregorian calendar.

Sarawanai 30 days  
Paddararowanae 30 days  
Sujewi 30 days  
Pacheke` 31 days  
Posae 31 days  
Mangasara(ng) 32 days  
Mangasutewu 30 days  
Mangalompae 31 days  
Palagunae 30 days  
Naga 30 days  
Besakai 30 days  
Jettai 30 days

Based on what was put forward by Raffles (1817) it has provided an overview regarding *Lontara Bilang*, that the Bugis already had a calendar system before the influence of Islam entered and the arrival of Europeans in Indonesia. Then Raffles' opinion was strengthened by Jhon Crawfurd who was one of the figures who researched the Bugis Calendar who described the Bugis calendar system based on twelve months.\(^{30}\) So far the Bugis tribe is the largest community or tribe and in general is the strongest and most civilized ethnic group in Celebes (Sulawesi).

The historical background of the Bugis calendar is difficult to trace the early history of its application because the early calendar used the pre-Islamic calendar system, which did not use mathematics at all. But using the event year or using the event year or using the calendar year at the time of ascending the throne of the king's power.\(^{31}\) It is even unlikely that their recorded date is based on the reign of their king as it is in China. There are several kings mentioned in the text whose reign is very

\(^{30}\) Nor Sidin, 15.  
clearly recorded, namely Latenri Suki who has reigned for twenty seven years; King Botee who reigned twenty-five years; King Bokonge who ruled for thirty-five years, and made the kingdom of Bone the benchmark for calculating the reign. And this is not found in the historical records of other tribes, including the more civilized Javanese and other kingdoms that have represented a good history for other regions.

The presence of the Bugis calendar has provided a basis for recording historical texts properly in South Sulawesi. Therefore the Bugis calendar is interesting or unique because the reign of each figure or king and other important events can be known and predicted with the right time. Matthes is a researcher from Europe who revealed a twelve-month calendar in the Bugis year which recorded the names of the months that were similar to the notes of other writers. Matthes' writing (1874) regarding the names of the months and their explanations is appropriate in Bugis society which can be read in the following excerpt:

a. Sarawani: One of the months of the Bugis year, for 30 days, starting 16 May.
b. Padawaranai: One of the Bugis years, for 30 days. First day of the month on June 15th.
c. Sujiari: One of the months of the Bugis year, for 30 days, which starts July 15
d. Pacingkai: One of the months in the Bugis year, for 31 days, which starts on 14 August
e. Pociai: One of the months of the Bugis year, for 31 days, which starts September 14
f. Mangasirai: One of the months in the Bugis year, for 31 days, at that time it was an ordinary year or basitah being 32 days, a leap year or sala leap, starting 15 October.
g. Mangasetiwi: One of the months of the Bugis year, for 30 days, which starts on 16 November.
h. Mangalompai: One of the months of the Bugis year, for 31 days starting December 16.
i. Nagai: A 30-day month, beginning January 17th
j. **Palagunai**: One of the months of the Bugis year, for 30 days, starting 15 February.

k. **Besakai**: One of the months of the Bugis year, for 30 days, starting March 17

l. **Jettai**: One of the months of the Bugis year, for 30 days, starting April 16.\(^{32}\)

If you pay attention to Matthes' description of the names of the Bugis months, it can be seen that some of them show similarities to the Saka calendar. However, if the writing and mention still show differences. In his book, Matthes explains that it has been a long time since the Bugis community has implemented twelve months in their annual calendar system. And Matthes also revealed that the Bugis calendar or calendar actually uses the solar system, namely the annual calendar calculation based on the earth's circulation around the sun.\(^{33}\) One of the *Lontara* manuscripts that can provide information regarding the system of using the twelve months in the Bugis calendar is the Bugis manuscript in the *Staatsbibliothek zu Berlin* collection in the form of a manuscript coded VI 18 accompanied by historical stories related to several kingdoms of South Sulawesi.

![Figure 3. Manuscript on VI 18 Code](image)

The Bugis people know the daily calendar which is still used today and is still being preserved. This daily calendar is used on important days by the Bugis people

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\(^{33}\) Nor Sidin, 26.

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such as wedding days based on the Bugis Lontara. In the Bugis daily calendar there are 5 (five) categories of daily cycles, including:

a. The three-day cycle, namely Bilang Tellu
b. The five-day cycle, namely Number Five
c. The seven-day cycle, namely Blang Pitu
d. The nine-day cycle, namely Bilang asera
e. The twenty-day cycle, namely Bilang Duappulo.

This calculation is also used as a guide in all socio-cultural activities of the people of South Sulawesi.\textsuperscript{34} Since the 16th century during the reign of King Bone XI, who embraced Islam, cultural acculturation took place with the inclusion of Islamic law as one of the principles of life for the Bugis tribe called Pangadereng (Rapang, siri, ade, and syara or Islamic law). However, differences still remain in the ancestral culture regarding days, months and years which are believed to be good or bad in starting a particular job or used as a special address for an incident or event.\textsuperscript{35}

D. Conclusion

The Bugis calendar or calendar system is a tradition or culture passed down by ancestors which is written down in written form (Lontara) based on natural signs as the basis for Bugis society in terms of calendars. The Lontara Bugis calendar system is still used by the Bugis community today and is believed to be correct, especially in determining the day for weddings, moving houses, and when they want to go abroad. Apart from being a reference in carrying out certain activities, it is also considered to have a positive value, this calendar system has also become a strong basis in the past that has existed and is officially used in recording Sure Bilang. The local wisdom of the Bugis community should be appreciated regarding the knowledge of the calendar system created and practiced by the ancestral community as a high culture.

\textsuperscript{34} Nor Sidin, 60.

\textsuperscript{35} Muh Rasywan Syarif, \textit{Perkembangan Perumusan Kalender Islam Internasional: Studi Atas Pemikiran Mohammad Ilyas}, 55.
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