

# Communicating With Ancestors: Paired Clauses in the Buntang Ritual of the Dayak Maanyan in East Barito, Central Kalimantan, Indonesia

Dwiani Septiana

Sebelas Maret University, Surakarta, Indonesia;  
Research Center for Language and Literature Preservation, National Research and Innovation Agency, Jakarta, Indonesia

Wakit Abdullah Rais

Sebelas Maret University, Surakarta, Indonesia

Sahid Teguh Widodo

Sebelas Maret University, Surakarta, Indonesia

Andi Indah Yulianti

Research Center for Language and Literature Preservation, National Research and Innovation Agency, Jakarta, Indonesia

**Abstract**—This study documented the structure and meaning of the language used in the Buntang ritual, as practised among the Dayak Maanyan in East Barito, Kalimantan, Indonesia. This is a special language spoken by this group, living in the southern part of Borneo, to communicate with their ancestors' spirits. In our documentation, we observed the Buntang ritual, the location of the ceremony, the participants involved, and the interactions between participants to obtain a complete record of the Buntang ritual. We then interviewed a wadian, "priest", for a complete transcription of the speech used during the ritual. The language used in ritual features constructions of paired clauses. Drawing on the awakening and summoning practices for ancestors' spirits in this ritual, we documented 2,868 paired clauses. The first clause of the pair uses words from daily use in the Maanyan language, while the second clause uses words that are only used in the ritual. Pairs are a combined form of two clauses with the same meaning in an unequal number of words. This inequality occurs because of verb, noun, or adverb reductions at the beginning of the second clause and word additions at its end.

**Index Terms**—Buntang ritual, Dayak Maanyan, East Barito, pairing clauses, ritual language

## I. INTRODUCTION

The language used in the traditional rituals of the Dayak Maanyan (DMn) is considered sacred. It is believed to have the magical ability to communicate with ancestral spirits (Fox, 2014). This ritual language differs substantially from everyday language at the phonological, morphological, syntactic, and lexical levels (Saville-Troike, 2003; Umaña, 2019). Siegel (2018), in his notes on rituals carried out by American Indian community groups, said that such a language was considered to be a pure language, not mixed with any foreign words.

A study of the language used in rituals of the Dayak tribe in Kalimantan was first performed by Hardeland (1858), who provided an overview of the spiritual language of the Ngaju Dayak community, called Sangiang. Follow-up work was later developed by Schärer (1966). Complete documentation of the death ceremony in the Ngaju Dayak community was provided, along with texts related to the Sangiang language used in the ceremony. Hardeland and Schärer succeeded in documenting the rituals and language used in death rituals for the Ngaju Dayak community. However, this research did not produce an analysis of sentence structure in ritual language.

Ritual language in DMn was documented by Mage (2014) in the context of traditional wedding ceremonies, using a form of ritual language known as Pangunraun. Mage examines the meaning in the language of traditional wedding ceremonies. Linarto (2015) describes the clause structure of the DMn language Pangunraun in wedding ceremonies and analyzes it to determine its relative clause structures, complementary clause structures, and basic sentence structures. The most prominent linguistic structure in the Pangunraun is words or groups of paired words that have the same meaning. The language approach that seeks alignment in meaning for words or phrases occupying the same function with the same grammatical form is called parallelism (Keraf, 2004). The two previous studies on ritual language in the DMn community have not yet produced an analysis of the parallel form of communication with ancestral spirits.

Parallelism was first proposed for ritual language by Lowth (Fox, 1986), who suggested a form of synonymous parallelism, antithesis, and synthesis. Later, during the first half of the twentieth century, a series of studies were conducted on parallelism in ritual language in various languages, such as, Vietnamese, Chinese, Classical Maya, Quechua, Russian, Turkish, etc. (Fox, 2014; Jakobson, 1992). Parallel languages in Indonesia have hitherto mainly been studied in research on languages in the eastern part of Indonesia. One recent study was conducted by Asplund (2017), who researched parallel forms in ritual language in Sumba. He identified a reduction in the coordination of paired clauses but did not yet show any semantic relation between parallel lines in Sumba. This study has a broader scope, as it examines ritual language in parallel clause structures and the meaning connections between words in pairs. To provide documentation on these types of language, we studied the Buntang ritual and documented the language. How are these paired clauses constructed, and what is the meaning of these paired clauses? This paper fills the gap in the structure and documentation of ritual language in DMn.

## II. RESEARCH METHOD

The study was conducted in the village of Jaar in the East Barito district, Central Kalimantan province, from July 2019 to March 2020. The DMn community resides in this area and maintains its ancestral heritage and traditional rituals.

### A. Data Collection Procedures

The primary data in this study is *wadian* speech in the Buntang ritual. Observations, interviews, and recordings were used to collect the data. We observed the Buntang ritual, the location of the ceremony, the participants involved, and the behavior and interactions between participants to obtain a complete record of the ritual. We interviewed a *wadian*, or priest, to obtain a complete transcription of the *wadian* speech that is used during the ritual. Speech transcription was performed following the observation of the Buntang ritual with the assistance of the *wadian*.

### B. Data Analysis Procedures

The data analysis followed the stages of linguistic data analysis proposed by Santosa (2021): domain analysis, taxonomy, componential, and cultural themes. For the domain analysis, we identified the main domains playing a role in supporting, managing, and providing the unique structure of the ritual that is under study. Then, we sorted data and non-data for each domain. Next, we collect data to conduct a detailed description of the section to help identify hierarchical groupings in taxonomic analysis.

In the taxonomic analysis, we organized data based on the natural categories of research object reality to organize knowledge into logically separate categories. The category of paired clause structures and the relationship of meaning between paired clauses use the concept of semantic relation.

Componential analysis connects all domain and taxonomic categories into one matrix (Santosa, 2021). We use this approach to relate all components in the domain, ritual stages, and paired clauses to components in taxonomy, clause structures, and meaning relations.

## III. RESULTS

The DMn community categorizes their language into language for daily use and *Pangunraun*, which is only used in rituals (Mage, 2014; Septiana et al., 2019). The categorization of the two languages is based on the culture of the DMn, which assumes that everything involved with the relationship to the ancestors must be something sacred, different, and valuable, including the sacred language used to communicate them.

*Pangunraun* in use is structured like a poem with stanzas using different words from everyday DMn language (Linarto, 2015; Mage, 2014; Septiana et al., 2019). The structure of the sentences that are spoken by *wadians* in the Buntang ritual is divided into two categories: words that are commonly used in everyday language and words that are used only ritual.

In practice, utterances come in paired clauses. A first clause uses the everyday language, and a matching clause uses variants the ritual language. Evans (1953) and Fox (2005) found that word variants in ritual language could derive from several sources. The words in ritual are from (1) the daily language of the local community; (2) special word variants that are easy to understand albeit appearing in a poetic form; (3) word variants that are not in daily use in the local community but are found in the language used in other villages; (4) word variants borrowed from Malay; and (5) word variants that are only used in sacred language related to rituals.

TABLE 1  
PAIRED CLAUSES

No	Transcription	Meaning
(1)	a. <i>lawu ma hi ammah nutu gunting</i> b. <i>ma bapang* nyumit walu</i>	fell on to the father scissors to the father of cutting
(2)	a. <i>hatur taring ma damung datu tatau,</i> b. <i>muis lalai ma raden bugawan sugis*</i>	handing fangs to rich <i>damung datu</i> handing fangs to rich <i>raden bungawan</i>
(3)	a. <i>lawu damung lamuara,</i> b. <i>patis* kijang amau jangkau</i>	fall into <i>damung lamuara</i> path of long step deer

The first clause (a) in Table 1 is commonly used in everyday language. The second clause (b) uses a word variant that appears in the ritual language. Variants of these words come from the DMn language itself and only appear in rituals. Some come from other languages that are used around the DMn. The word *ammah* under heading (1) in Table 1 includes the variant *bapang* “father,” derived from a word in Dayak Ngaju. The word *tatau* “rich” in (2) is a variant of the word *sugis*, which comes from Banjar or Malay. The title *damung* “leader of a region” in heading (3) in Table 1 has the variant *patis*, or *patih*, which comes from Javanese.

Words in categories (a) and (b) in Table 1 have the same or parallel meaning; this confirms Fox’s (1989) statement regarding how the language used in rituals forms paired structures. These pairs, variants of common words and others that are not commonly used, manifest the sacred and the profane in the beliefs of the DMn community. As Durkheim (2017) noted, all religions divide the universe into two categories: the sacred and the profane. The profane includes all things that can be observed empirically or known through common everyday experience. The sacred, on the other hand, consists of wondrous things that can only be understood through extraordinary experiences. The words that appear in this Buntang ritual and are commonly used in everyday language are profane word forms, whereas words that are not commonly used and that only appear in ritual contexts are sacred word forms. Certain variants of everyday words that are common and can be understood and used by everyone fall into the profane realm, and variants of words that are not commonly used cannot be used carelessly because of their sacred status.

The words used in both categories have the same meaning. The difference is that the unusual words from the second clause (b) are categorized as sacred and are only used to communicate vertically, with the ancestors’ spirits, and the common words from the first clause (a) are used horizontally, to teach people about the universe and values.

A clause pair combines two parallel clauses with the same meaning. Parallel pairs of clauses that have the same meaning are described on the basis of the word elements in a given clause. In general, the number of words in paired clauses is the same, but in some cases, they are not. A paired clause is categorized in perfect parallelism with repetition of the same number of words and word classes. Word elements that are unequally paired can be organized in imperfect parallelism through repetition of an unequal number of word elements.

#### A. Perfect Parallelism

The parallelism of word elements in a paired clause with the same number of word elements entails that each word in the first and second lines of the paired clause has the same meaning. The first and second clauses also have the same basic construction. See, for example, the transcriptions in Table 2.

TABLE 2  
PAIRED CLAUSES WITH EQUAL NUMBERS OF WORDS

No	Transcription	Meaning
(4)	<i>tawah anak datu teka purun gunung</i> 1 2 3 4 5 6	the king’s son cleans from the bottom of the mountain
	<i>jupak bunsu raja teka lea watu</i> 1 2 3 4 5 6	
(5)	<i>hanang atei kala neah ubang langit</i> 1 2 3 4 5 6	heartache is like opening a hole in the sky
	<i>sakit raya alang ngubak wingkir anrau</i> 1 2 3 4 5 6	
(6)	<i>ngele gunung kala kumar bawang</i> 1 2 3 4 5	wake up mountains like layers of onions
	<i>nungkui watu nimang hapat sabe</i> 1 2 3 4 5	

Transcription (4) in Table 2 has six paired word elements. Both clauses (a and b) have the same construction: predicate + subject + adverb of place. Transcription (5) is similar; the six words in the first clause have the same meaning as their counterparts in the second clause, and they are built with the same clause construction. Again, transcription (6) has five words elements paired between clauses, and both clauses have the same construction.

These paired clauses can exhibit perfect parallelism because they show has the same number of words that share a meaning between the first and second clauses. Asplund (2017) notes that the first line of a paired clause in ritual language refers to women and has an unimportant meaning, whereas the second line refers to men and has an essential one. This study found a different interpretation. The first clause of the paired clause in the DMn ritual uses common word variants in everyday language. The second clause uses word variants that are not commonly used and are only used in ritual contexts. These common and uncommon languages relate to Durkheim’s (2017) separate domains of the sacred and the profane life. Pals (2011) added that the sacred is high, majestic, powerful, respected, and, when one is in a profane condition, is not to be touched. Meanwhile, the profane is every day, ordinary life. These sacred and profane categories are represented in variations of the DMn language in ritual speech, which is only used in the context of ritual as sacred and used daily as profane.

#### B. Imperfect Parallelism

The parallelism of word elements in paired clauses is not always the same in terms of the number of words. This inequality occurs because of the reduction and addition of words.

### C. Word Reduction

Word reduction does not impact the spelling of any particular element in a sentence or text (Alwi et al., 2003; Asplund, 2017). It occurs in the second clause and at the beginning of the clause as seen in Table 3. Fox (2014), in his work on parallel language in Rote, found that nonparallel forms occur because there are half-paired lines. Asplund (2017) identified this as a reduced coordination generally occurring at the beginning of the second clause. Fox and Asplund did not mention what elements are lacking in a coordinated and paired clause. In this study, we call this the reduction of coordination. Table 3 presents some examples of word the reduction of coordination in paired clauses.

TABLE 3  
VERB REDUCTION IN PAIRED CLAUSES

No	Transcription	Meaning
(7)	<u>ngamule papaken ure</u> 1 2 3 <u>kayu murung walang wua</u> 2 3	planting papaken does not bear fruit the tall tree does not bear fruit
(8)	<u>tunuk punsak gunung weah</u> 1 2 3 4 <u>pangkat watu wungentaun</u> 2 3 4	bow the top of the mountain of rice the top of the hill of annual flowers
(9)	<u>inau wadian teka itik watu</u> 1 2 3 4 <u>balanut teka hansa lili</u> 2 3 4	down the Wadian from the end of the rock the Balanut from the rock
(10)	<u>lawu ma hi mantir gelung</u> 1 2 3 4 <u>uria bujang tanang</u> 3 4	down to the Mantir gelung the calm knight

Verb reduction eliminates a verb element in a sentence construction. Transcriptions (7), (8), and (9) in Table 3 show the same pattern of reduction of verbal elements at the beginning of the second clause. There is also a reduction in verbs of motion and in direction markers that follow them. Transcription (10) shows the reduction of the verb, followed by a word marking direction, namely, *ma* “to”.

The reduction can occur in the noun at the beginning of the second clause. Noun reduction removes a noun or a noun phrase that has the function of a subject in a clause construction. Table 4 provides an example of noun reduction in the paired clause.

TABLE 4  
NOUN REDUCTION IN PAIRED CLAUSES

No	Transcription	Meaning
(11)	<u>ulun pasiau jari tunun</u> 1 2 3 4 <u>barabut janang tangkai</u> 2 3 4	people fight to be a stump fight to become a stalk
(12)	<u>weahku nyindalu ramai</u> 1 2 3 <u>nyikahung repun sumu</u> 2 3 4	my rice comes to the crowd join the crowd

Noun reduction is found in the second clause of the same meaning pair. Transcriptions (11) and (12) present the same pattern of reducing noun elements as subjects in the second clause. The first clause is not said again in the second clause to avoid repetition (Quirk et al., 1985). The reduction may also have occurred because the speaker believed that the interlocutor could correctly conclude what or who is meant, as the subject removed in the following clause (Nariyama, 2004).

There is also a noun and verb reduction at the beginning of the second clause. The noun and verb function as subjects and predicates in clause construction. Table 5 shows an example of noun and verb reduction.

TABLE 5  
NOUN AND VERB REDUCTION IN PAIRED CLAUSES

No	Transcription	Meaning
(13)	<u>aku ngele uyu agung</u> 1 2 3 4 <u>laluma tanru tatau</u> 3 4	I wake up to the sound of a gong the retorts crow wealth
(14)	<u>aku manumbak ka liang agung</u> 1 2 3 4 5 <u>ka liang ganing</u> 3 4 5	I speared into the gong hole into the gending hole

In clause construction, noun and verb elements are reduced in the second clause of paired clauses with the same meaning. Transcriptions (13) and (14) show the same pattern: reducing the noun element as the subject and the verb as the predicate in the second clause.

The reduction of the adverb is also found in the paired clause. The following table shows adverb reduction.

TABLE 6  
ADVERB REDUCTION IN PAIRED CLAUSES

No	Transcription	Meaning
(15)	<u>wau widi teka tanyung jawa</u> 1 2 3 4 5 <u>tuket teka tane pilayaran</u> 2 3 4 5	just bought from Tanjung jawa buy from shipping land
(16)	<u>haut manaharak lalan rampu</u> 1 2 3 4 <u>mananrukui enui piguruan</u> 2 3 4	have followed the path of the teacher follow the path of the teacher

Transcriptions (15) and (16) exhibit the reduction of adverb elements to explain the verb. The similarities between *wau* “new” and *haut* “already” at the beginning of the first clause do not appear in the second clause.

Reduction of word elements appears at the beginning of the second clause and may be of the noun, verb, or adverb. The reduced part continues to have the same form as the first one, and the speaker can assume that the speech partner can correctly understand the reduced element. To avoid repetition and increase efficiency, some parts of the second clause are reduced. The highlighted information in the second clause regards the repetition or similarity of the verb and the object elements or complements in the form of other language variants. The word elements are also related to cultural concepts in the DMn. There are sacred and profane categories in the language that is spoken in rituals, so the information that should be highlighted in the second clause is the similarity of the words in the first clause to those only used that are in rituals.

#### IV. CONCLUSION

The most prominent characteristic of ritual language is its poetic form and the use of parallelism or pairing of meanings in its instantiations, which can create the effect of beautiful sound. The language in the ritual reflects the sacred and profane aspects of the community's beliefs. The first clause of the parallel pair uses the DMn that is used daily as the profane aspects. The second clause uses ritual-specific words that only appear in a ritual context to communicate with ancestral spirits as the sacred aspects. The paired clauses form perfect and imperfect parallelisms. Perfect parallelism occurs in pairs of clauses with the same number of word elements, where each word has the same meaning in the first and second clauses. In imperfect parallelism, the two halves do not match due to the reduction of verbs, nouns, and adverbs in the initial position in the second clause with the addition of word elements at the end of the second clause.

#### REFERENCES

- [1] Alwi, H., Dardjowidjojo, S., Lapoliwa, H., & Moeliono, A. M. (2003). *Tata Bahasa Baku Bahasa Indonesia* [A Grammar of Indonesian Language]. Balai Pustaka.
- [2] Asplund, L. (2017). *Some formal characteristics of parallel speech in Kambara*. Retrieved April 20, 2022, from <http://www.diva-portal.org/smash/get/diva2:1108705/FULLTEXT01.pdf>
- [3] Durkheim, E. (2017). *The Elementary Forms of Religious Life*. IRCiSoD.
- [4] Evans, I. H. N. (1953). *The Religion of the Tempasuk Dusun of North Borneo*. Cambridge University Press.
- [5] Fox, J. J. (1986). *Bahasa, Sastra, dan Sejarah: Kumpulan Karangan Mengenai Masyarakat Pulau Roti* [Language, Literature and History: A Collection of Essays About the People of Roti Island]. Djambatan.
- [6] Fox, J. J. (1989). Our Ancestors Spoke in Pairs’: Rotinese Views of Language, Dialect, and Code. In R. Bauman & J. Sherzer (Ed.), *Explorations in the Ethnography of Speaking (Studies in the Social and Cultural Foundations of Language)* (hal. 56–86). Cambridge University Press. <https://doi.org/10.1017/CBO9780511611810.007>
- [7] Fox, J. J. (2005). Ritual Languages, Special Registers and Speech Decorum in Austronesian Languages. In A. Adelaar & N. P. Himmelmann (Ed.), *The Austronesian Languages of Asia and Madagascar* (hal. 87–102). Routledge, Taylor and Francis Group. <https://doi.org/https://doi.org/10.4324/9780203821121>
- [8] Fox, J. J. (2014). *Explorations in Semantic Parallelism*. ANU Press.
- [9] Hardeland, A. (1858). *Versuch einer Grammatik der Dajackschen Sprache*. Frederik Muller.
- [10] Jakobson, R. (1992). Linguistik dan Bahasa Puitik [Linguistics and Poetic Language]. In P. Sudjiman & A. Van Zoest (Ed.), *Serba-serbi Semiotika* [Everything about Semiotics]. Gramedia Pustaka Utama.
- [11] Keraf, G. (2004). *Diksi dan Gaya Bahasa*. Gramedia Pustaka Utama.
- [12] Linarto, L. (2015). Struktur Klausa Bahasa Maanyan dalam Pangunraun Taliwakas Paadu [Maanyan Language Clause Structure in Pangunraun Taliwakas Paadu]. *Jurnal Bahasa, Sastra, dan Pembelajarannya (JBSP)*, 5(1), 1–13. Retrieved April 21, 2022, from <https://doi.org/http://dx.doi.org/10.20527/jbsp.v5i1.3706>
- [13] Mage, A. M. (2014). *Semantic Analysis of Ethnopoetics of Pangunraun In Marriage Negotiations of Maanyan Dayak of Central Kalimantan*. The Multifaceted Dimensions of English Linguistics, Literature, and Education. Retrieved April 22, 2022,

<http://digilib.iain-palangkaraya.ac.id/977/1/37>. Arnusianto M. Mage 343-363.pdf

- [14] Nariyama, S. (2004). Subject ellipsis in English. *Journal of Pragmatics*, 36, 237–264. [https://doi.org/10.1016/S0378-2166\(03\)00099-7](https://doi.org/10.1016/S0378-2166(03)00099-7)
- [15] Pals, D. L. (2011). *Seven Theories of Religion*. IRCiSoD.
- [16] Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. Longman Group.
- [17] Santosa, R. (2017). *Metode Penelitian Kualitatif Kebahasaan*. UNS Press.
- [18] Santosa, R. (2021). *Dasar-dasar Metode Penelitian Kualitatif Kebahasaan [Basics of Qualitative Linguistic Research Methods]*. UNS Press.
- [19] Saville-Troike, M. (2003). *The Ethnography of Communication: An Introduction* (3rd Ed.). Blackwell Publishing Ltd.
- [20] Schärer, H. (1966). *Der Totenkult Der Ngadju Dajak In Süd-Borneo: Mythen Zum Toten Kult Und Die Texte Zum Tantolak Matei*. Martinus Nijhoff.
- [21] Septiana, D., Santosa, R., & Sumarlam. (2019). Riak in Dayak Maanyan Ritual Tradition (An Ethnolinguistics Study). *Langkawi: Journal of The Association for Arabic and English*, 5(2), 79–90. <https://doi.org/http://dx.doi.org/10.31332/lkw.v5i2.1378>
- [22] Siegel, J. S. (2018). *Demographic and Socioeconomic Basis of Ethnolinguistics*. Springer International Publishing AG.
- [23] Umaña, A. C. (2019). Ritual Singing and Poetry Among the Bribri. In M. Ortega-Rodríguez & H. Solís-Sánchez (Ed.), *Costa Rican Traditional Knowledge According to Local Experiences Plants, Animals, Medicine and Music* (hal. 113–126). Springer Nature Switzerland AG. [https://doi.org/https://doi.org/10.1007/978-3-030-06146-3\\_8](https://doi.org/https://doi.org/10.1007/978-3-030-06146-3_8)



**Dwiani Septiana** was born in Palangka Raya, Central Kalimantan, Indonesia. She received her Bachelor's and Master's Degrees in Linguistics at Diponegoro University, Semarang. She obtained her doctoral degree in Linguistics from the Program Study Linguistics Doctoral, Faculty of Cultural Sciences, Sebelas Maret University, Surakarta, in 2022. After completing her doctorate, she continued to advance his career as a Junior Researcher at the Research Center for Language and Literature Preservation, National Research and Innovation Agency, Jakarta, Indonesia. Her scholarly concentration is in language documentation, indigenous languages, ethnolinguistics, and language typology. She has been actively involved in linguistic research, particularly in Language Documentation and Description, Preservation of endangered languages and revitalisation efforts in Kalimantan. The results of his research have been widely published in several national and international journals. Contact her via email at [dwia019@brin.go.id](mailto:dwia019@brin.go.id)



**Wakit Abdullah** was born in Ngawi, Central Java. He obtained his doctoral degree in Linguistics from the Program Study Linguistics Doctoral at Sebelas Maret University in 2013. Then, in 2017, He became an ethnolinguistic professor for local wisdom. He serves as deputy dean at the Faculty of Cultural Sciences at Sebelas University. He actively teaches doctoral students in linguistic and cultural studies programs. Contact him via email at [abdullahwakit@yahoo.com](mailto:abdullahwakit@yahoo.com). You can search his research and publications via Google Scholar. <https://scholar.google.co.id/citations?user=P5AGKycAAAAJ&hl=id>



**Sahid Teguh Widodo** was born in Grobogan, Central Java. He obtained a PhD in applied linguistics from the University of Utara Malaysia in 2010. He is currently a professor in applied linguistics at the Faculty of Cultural Sciences, Sebelas Maret University. Currently, he serves as head of the Javanology Institute. He actively teaches and researches the language and culture in Indonesia. Contact him via email at [sahidteguh Widodo@yahoo.com](mailto:sahidteguh Widodo@yahoo.com). You can search his research and publications via Google Scholar. <https://scholar.google.co.id/citations?user=3kKmXbgAAAAJ&hl=id>



**Andi Indah Yulianti** was born in Banjarbaru, South Kalimantan, Indonesia. She finished her undergraduate program at Hasanuddin University and continued to Brawijaya University, Malang. She is a junior researcher at the Research Center for Language, Literature and Community, National Research and Innovation Agency, Indonesia. Her research interests are endangered language, language documentation, and language and literature preservation. Contact her via email at [andi047@brin.go.id](mailto:andi047@brin.go.id)