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ETNOBOTANY OF PLANTS IN THE MANDAILING TRADITIONAL WEDDING SERVICE IN THE VILLAGE AROUND THE BATANG GADIS NATIONAL PARK AREA, MANDAILING NATAL REGENCY

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ABSTRACT

This study aims to document belief systems, local knowledge systems, plant utilization practices, and find out the cultural importance or ICS of plant species used in traditional Mandailing wedding ceremonies in villages around the TNBG area. The research method is qualitative and quantitative. Data was collected through semi-structured interviews, participatory observation, documentation, focus group discussions (FGD), collection of plant samples and making herbarium. The plants used in the traditional Mandailing wedding ceremony are 43 species which are included in 20 plant families. Plants with high ICS value were found in *burangir* (*Piper betle* L.), *sontang* (*Uncaria rhynchophylla* Miq.), *pining* (*Areca catechu* L.), and *timbako* (*Nicotiana tabacum* L.) with an ICS value of 96.

Introduction

Indonesia is a country that has many ethnic groups. According to Triwahyudi (2017) Indonesia has around 633 ethnic groups obtained from ethnic groupings in Indonesia. The tribes in Indonesia generally still carry out traditional customs and culture in their daily life. They also have local knowledge that comes from their ancestors as well as knowledge that comes from interactions with their surroundings. In addition to ethnic and cultural richness, Indonesia also has high biodiversity originating from various ecosystems in Indonesia. Plants are a form of biodiversity that surrounds us, both wild and cultivated (Zubair *et al.*, 2019).

Ethnobotany is a science that studies the use of plants used by certain ethnic groups or tribes to meet the needs of clothing, food and medicine (Astria *et al.*, 2017). Ethnobotany also examines the use of plants for traditional rituals by tribes in Indonesia. Plant ethnobotany as a traditional ritual studying the use of plants as a medium in traditional rituals in society, especially in traditional societies. Kholifah *et al*., (2020) stated that each tribe has different knowledge in terms of plant utilization. Plants are believed to have ritual meanings symbolized by each tribe at traditional ceremonies, according to their use based on local knowledge.

One of the tribes in Indonesia that has a local knowledge system in utilizing plants in traditional wedding ceremonies is the Mandailing Tribe. One of the activities in the *horja pabuat boru* the Mandailing Tribe is

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mangalehen mangan. *Mangalehen mangan* is feeding the bride and groom to be made (picked up) which is called *mangalehen mangan pamunan* (farewell meal). The purpose of this ceremony is to give advice on how the bride and groom should run the household ark, and must uphold the dignity of their family (Nasution, 2012). One of the plants used in this ceremony is rice or *eme* with the Latin name *Oryza sativa* L.. *Eme* (*Oryza sativa* L.) in the Mandailing Tribe symbolizes sincerity of heart. Mandailing people mention *suan tobu di bibir dohot di ate-ate* which means that what we do must be sincere, not just sweet on the lips, bitter in the heart.

Traditional wedding ceremonies carried out by the community began to be eroded by the current of modernization. Regarding the use of plants in traditional wedding ceremonies, local knowledge and community belief systems are decreasing so that their existence is not noticed. Moreover, documentation regarding the use of plants in traditional wedding ceremonies is still relatively small and the transfer of knowledge from generation to generation is mostly done orally so that knowledge about plants used in traditional wedding ceremonies is not known by young people. Plants used in traditional wedding ceremonies are not entirely obtained from the garden or forest, but must be purchased. Whereas the Mandailing people have a large area of land to cultivate these plant species. This is thought to be due to a lack of cultivation and plant conservation efforts so that their existence is difficult to find, so they must be purchased.

Another problem is the lack of documentation of traditional wedding ceremonies in the Mandailing Tribe. One of the documentation efforts is a book written by Lubis (2005) as a traditional leader in Ulu Pungkut District related to the Mandailing tribal wedding ceremony entitled "Hombang Ni Napuran Hobaran Adat Pabuat Boru Dohot Horja Siriaon". However, this book only discusses about makkobar (giving advice) in the traditional wedding ceremony of the Mandailing Tribe, so that information about the characteristics of plants and their ritual meaning is difficult to find. Documentation of the use of plants in the traditional wedding ceremony of the Mandailing Tribe needs to be done, so that it is not lost. This information will later play a very important role in plant conservation efforts for the Mandailing Tribe and can be information for the next generation in the future.

Based on the description above, it is necessary to conduct research with the title "Plant Ethnobotany in the Traditional Wedding Ceremony of the Mandailing Tribe in the Village Around the Batang Gadis National Park Area, Mandailing Natal Regency".

Materials and Methods

This research was carried out in villages around the TNBG area, namely Huta Padang Village, Ulu Pungkut District and Huraba I Village, Siabu District, Mandailing Natal District. This research was carried out in December 2021-July 2022.

The tools used in this research were stationery, camera, sound recording equipment, hanging labels, scissors, plastic bags, mounting paper, rope, newsprint, thread, needle, glue/insulation, tissue, specimen paper and wood presses. for In conducting this research, 70% alcohol and plant specimens were collected.

Data collection in this study was carried out through semi-structured interviews, participatory observation, documentation, collection of plant samples and making herbarium. The qualitative research aims to describe the belief system, local knowledge system and the practice of using plants used in the traditional wedding ceremony of the Mandailing Tribe.

Quantitative data for each plant species was analyzed by calculating the percentage of plant families, plant organs, plant habitus and plant origins obtained using the formulas according to Hidayat (2009):

1. Percentage of plant families

$$\frac{\sum Certain\ plant\ families}{\sum the\ whole\ family\ of\ plants\ used} x\ 100\%$$

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2. Percentage of plant habitus

$$\frac{\sum Specific\ habitus\ species\ used}{\sum\ the\ entire\ habitus\ of\ the\ plants\ used} x\ 100\%$$

3. Percentage of organs plant

$$\frac{\sum certain\ plant\ organs\ used}{\sum\ all\ plant\ organs\ used} x\ 100\%$$

4. Percentage percentage of origin obtained by plants

$$\frac{\sum origin\ of\ certain\ plants}{\sum\ All\ origins\ are\ obtained\ from\ plants} x\ 100\%$$

Quantitative data in the form of the importance of each plant used in traditional wedding ceremonies were analyzed with the Index of Cultural Significance following Turner (1988) with the following modifications:

$$\text{ICS} = \sum_{i=1}^{n} (\text{q x i x e})$$

Information:
q : quality value
i : intensity value
e : exclusivity value

Results and Discussion

The Mandailing Tribe's Belief System Related To The Use Of Plants In Traditional Wedding Ceremonies

Based on the results of interviews in villages around the Batang Gadis National Park area, namely Huta Padang Village and Huraba I Village, Mandailing Natal Regency with 8 informants each, it is known that the traditional wedding ceremony by the Mandailing Tribe has several stages. Traditional wedding ceremonies that use plants are *manulak sere, marsipulut, horja pabuat boru,* and *haroan boru*. This traditional wedding ceremony uses 43 species of plants that belong to 20 families.

Manyurdu burangir is an activity that is always carried out in the traditional wedding ceremony of the Mandailing Tribe. The plants used in manyurdu burangir are *burangir (Piper betle* L.), *sontang (Uncaria rhynchophylla* Miq.), *pining (Areca catechu* L.), and *timbako* (*Nicotiana tabacum* L.). The four tools of manyurdu burangir signify humans as *lima sauduran* (series) starting at with children, teenagers, adults, the elders, and the king. *Burangir* symbolizes the Mandailing Tribe who are of one heart and agree.

The Mandailing tribe in the village around the TNBG area selects and uses certain plant parts for use in traditional wedding ceremonies. For example, the Mandailing Tribe uses *bulu* (*Bambusa vulgaris* Schrad.) and *otang* (*Calamus caesius* Blume.) as the basic ingredients for making induri or parsege in the traditional ceremony of manulak sere. *Induri* or *Persege* is woven from *bulu* (*Bambusa vulgaris* Schrad.) in the form of a plot symbolizing humans who are united in family ties that form a society. The edge of the webbing tied with *otang* (*Calamus caesius* Blume.) means that the rules cannot be violated.

The use of *sipulut* (*Oryza sativa var. glutinosa* (Lour). Korn.) in the *marsipulut* means as a glue in all traditional conversations. The dish of snails (*Oryza sativa* var. *glutinosa* (Lour). Korn.) means that everything that is spoken of is equally attached to the liver according to the texture of the snails (*Oryza sativa* var. *glutinosa* (Lour). Korn.) when cooked.

Traditional ceremony *Horja Pabuat Boru* is the departure of the groom to the bride's house. The tip of the leaf (*Bulung ujung*) of banana (*Musa* sp.) is used as a wrapper for the *indahan tungkus* (rice wrap) brought by the family of the groom during *horja pabuat boru*. The Mandailing people believe that the *Bulung ujung* Banana (*Musa* sp.) means that everything has a beginning and an end, which in marriage customs means that the bride and groom must start the household and end adolescence. The use of *indahan* (*Oryza sativa* L.) during a traditional wedding ceremony has the meaning of

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sincerity of heart. *Bungo karotes* (*Bougainvillea spectabilis* Willd.) is used as a decoration on the beauty which means sacred and fragrant.

Mangalehen mangan (farewell meal) in the traditional ceremony of *horja pabuat boru* uses several plant species as dishes. White rice (*Oryza sativa* L.) has the same meaning as the *indahan silua* which is a symbol of sincerity of heart. *Mangambat boru* in the traditional ceremony of *horja pabuat boru* is still carried out at the bride's house where the bride and groom will be intercepted by their *namboru* children. The use of plants in this ritual is *harambir* (*Cocos nucifera* L.). Young coconut water (*Cocos nucifera* L.) is given to the bride and groom to drink. The Mandailing people believe that *harambir* (*Cocos nucifera* L.) water means that the married life of the bride and groom is like *harambir* (*Cocos nucifera* L.) which has many benefits so that it can benefit others.

Horja haroan boru (the bride's party to the groom's house) uses pining flowers (*Areca catechu* L.), *dahanon* or rice (*Oryza sativa* L.) which are colored with unique dyes (*Curcuma longa* L.). *Dahanon* (*Oryza sativa* L.) is soaked using the juice of the *hunik* (*Curcuma longa* L.), so that the *dahanon* is yellow, symbolized by gold. The meaning of using the two plants is that the bride and groom are always given sustenance. The *pining* flower (Areca catechu L.) in this traditional ceremony of Haroan Boru symbolizes the start of the new life of the two brides.

The use of banana (*Musa* sp.) and *dingin-dingin* (*Kalanchoe pinnata* (Lam.) Oken) midribs which are stepped on the front door of the house by the bride and groom means that the household atmosphere of the two brides is cool and peaceful and always gets sustenance. The use of ginger (*Zingiber officinale* Roscoe) at the ceremony symbolizes the taste of bitter, salt symbolizes the salty taste and *gulo bargot* derived from palm tree sap (*Arenga pinnata* (Wurmb). Merr) symbolizes sweet taste. The combination of bitter, salty and sweet tastes is expected by the bride and groom to get an idea that the household ark has many problems.

The Mandailing Tribe's Local Knowledge System regarding the Use of Plants in Traditional Wedding Ceremonies

In this study found 43 species of plants used in the Mandailing Tribe's traditional wedding ceremony which are included in 20 families as presented in Table 1.

Table 1. Species of plants used in the ceremony Mandailing Tribe wedding customs

No	Nama Tumbuhan		Famili	Organ Tumbuhan	Habitus
	Nama Lokal	Nama Ilmiah			
1.	*Burangir*	*Piper betle* L.	Piperaceae	Leaves	Herbs
2.	*Pining*	*Areca catechu* L.	Arecaceae	Seeds and flowers	Tree
3.	*Harambir*	*Cocos nucifera* L.	Arecaceae	Fruits	Tree
4.	*Otang*	*Calamus caesius* Blume.	Arecaceae	Stems	Liana
5.	*Pohon bargot*	*Arenga pinnata* (Wurmb). Merr	Arecaceae	Flower stalk	Tree
6.	*Kantang*	*Solanum tuberosum* L.	Solanaceae	Tubers	Herbs
7.	*Timbako*	*Nicotiana tabacum* L.	Solanaceae	Leaves	Herbs
8.	*Lasiak narara*	*Capsicum annum* L.	Solanaceae	Fruits	Herbs
9.	*Lasiak lamot*	*Capsicum frutescens* L.	Solanaceae	Fruits	Herbs

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10.	*Rimbang*	*Solanum torvum* Sw.	Solanaceae	Fruits	Shrub
11.	*Sontang*	*Uncaria rhynchophylla* Miq.	Rubiaceae	Leaves	Shrub
12.	*Sibodak*	*Artocarpus heterophyllus* Lam.	Moraceae	Fruits	Tree
13.	*Banana siolot*	*Musa sp.*	Musaceae	Fruit, Leaves And Stems	Herbs
14.	*Banana sitabar*	*Musa acuminata x balbisiana* Colla cv.Saba	Musaceae	Fruit, Leaves And Stems	Herbs
15.	*Banana barangan*	*Musa acuminata* Colla cv. Lacatan	Musaceae	Leaves and stems	Herbs
16.	*Banana sibantan*	*Musa acuminata* Colla cv. Ladys finger	Musaceae	Leaves and stems	Herbs
17.	*Banana sitalun*	*Musa paradisiaca* L.	Musaceae	Fruit, Leaves And Stems	Herbs
18.	*Banana siombun*	*Musa acuminata* Colla cv. Ambon putih	Musaceae	Leaves and stems	Herbs
19.	*Eme*	*Oryza sativa* L.	Poaceae	Seeds	Herbs
20.	*Sipulut*	*Oryza sativa* var. *glutinosa* (Lour) Korn.	Poaceae	Seeds	Herbs
21.	*Sangge-sangge*	*Cymbopogon nardus* (L.) Rendle	Poaceae	Stems	Herbs
22.	*Bulu*	*Bambusa vulgaris* Schrad.	Poaceae	Stems	Herbs
23.	*Pege*	*Zingiber officinale* Roscoe	Zingiberaceae	Rhizome	Herbs
24.	*Hunik*	*Curcuma longa* L.	Zingiberaceae	Rhizome and leaves	Herbs
25.	*Alas*	*Alpinia galanga* (L.) Willd.	Zingiberaceae	Rhizome	Herbs
26.	*Palaga*	*Amomum compactum* Sol. ex Maton	Zingiberaceae	Seeds	Herbs
27.	*Tanaon*	*Aleurites mollucana* (L.) Willd.	Euphorbiaceae	Seeds	Tree
28.	*Bulung gadung*	*Manihot esculenta* Crantz.	Euphorbiaceae	Leaves	Shrub
29.	Bawang merah	*Allium cepa* L.	Amaryllidaceae	Tubers	Herbs
30.	Bawang putih	*Allium sativum* L.	Amaryllidaceae	Tubers	Herbs
31.	*Unte asom*	*Citrus aurantiifolia* (Christm.) Swingle	Rutaceae	Fruits	Shrub
32.	Daun salam	*Syzygium polyanthum* (Wight) Walp.	Myrtaceae	Leaves	Tree
33.	*Congkeh*	*Syzygium aromaticum* (L) Merr. & LM. Perry	Myrtaceae	Flowers	Tree
34.	Pandan duri	*Pandanus tectorius* Parkinson ex Du Roi	Pandanaceae	Leaves	Shrub
35.	Pandan	*Pandanus amaryllifolius* Roxb.	Pandanaceae	Leaves	Shrub
36.	*Bunga karotes*	*Bougainvillea spectabilis* Willd.	Nyctaginaceae	Flowers	Shrub
37.	*Dingin-dingin*	*Kalanchoe pinnata* (Lam.) Oken	Crassulaceae	Leaves	Herbs
38.	Kacang merah	*Phaseolus vulgaris* L.	Papilionaceae	Seeds	Shrub
39.	Ketumbar	*Coriandrum sativum* L.	Apiaceae	Fruits	Herbs
40.	Jintan	*Cuminum cyminum* L.	Apiaceae	Seeds	Herbs
41.	*Bunga lawang*	*Illicium verum* Hook.f	Schisandraceae	Flowers	Shrub
42.	*Ulim*	*Cinnamomum burmanii* (Nees & T. Nees) Blume	Lauraceae	Stem	Tree

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43.	Asam potong	*Garcinia atroviridis* Griff. Ex T.Anderson	Clusiaceae	Fruits	Shrub

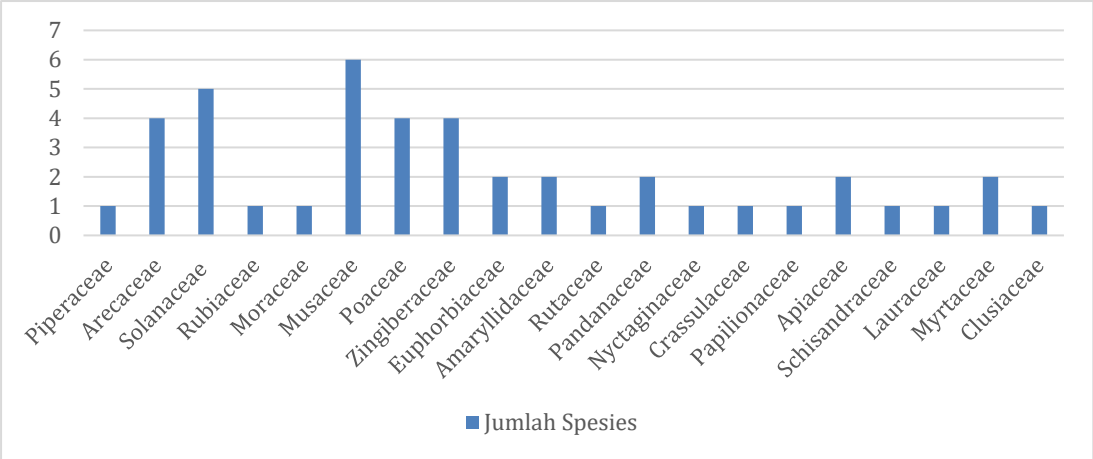

Figure 1. Plant family classification diagram The plant

Family used in traditional wedding ceremonies of the Mandailing Tribe consists of 20 families with 6 family species Musaceae with a percentage of 14% each, 5 species from the Solanaceae family with a percentage of 12% each, 4 species from the families Arecaceae, Zingiberaceae and Poaceae with a percentage of 9% each, 2 species from the families Euphorbiaceae, Pandanaceae, Amaryllidaceae, Myrtaceae and Apiaceae with a percentage of 5% each, and 1 species each from the families Piperaceae, Rubiaceae, Moraceae, Rutaceae, Nyctaginaceae, Crassulaceae, Papilionaceae, Schisandraceae, Lauraceae, Myrtaceae, Clusiaceae with a percentage of 2% each.

The use of the Musaceae family is widely used in traditional wedding ceremonies because there is more than one organ that can be used. The use of the Musaceae family in traditional wedding ceremonies is also carried out by the Javanese around the Surakarta Hadiningrat Kasunanan Palace in the research of Anggraini *et al.* (2018).

Based on their habitus, the plants used in the traditional wedding ceremony of the Mandailing Tribe are grouped into 4 habitus, namely herbs, trees, shrubs, and lianas. The percentage of plant habitus used for the Mandailing Tribe's traditional wedding ceremony is presented in Figure 2.

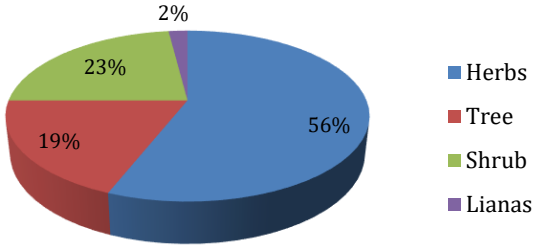

Figure 2. Percentage of plant habitus used

The most widely used plant habitus in the Mandailing Tribe's traditional wedding ceremony is in the form of herb habitus as many as 24 species with a percentage of 56%, followed by shrub habitus as many as 10 species with a percentage of 23%, tree habitus as many as 8 species with a percentage of 19%, and liana habitus as many as 1 species with a percentage of 2%. Plants with herbaceous habits are plants that are easy to

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grow and develop well in environmental conditions that are not shaded and have sufficient sunlight (Hidayat, 2017). This is in accordance with the location of Huta Padang Village and Huraba I Village, which are mostly open areas and not too many large tree species, so that sunlight is sufficient for the growth of herbaceous plants.

There are 8 plant organs used by the Mandailing Tribe in traditional wedding ceremonies, namely stems, fruit, leaves, rhizomes, flowers, tubers, seeds and bunch of flowers. The percentage of use of plant organs in the traditional wedding ceremony of the Mandailing Tribe is presented in Figure 3.

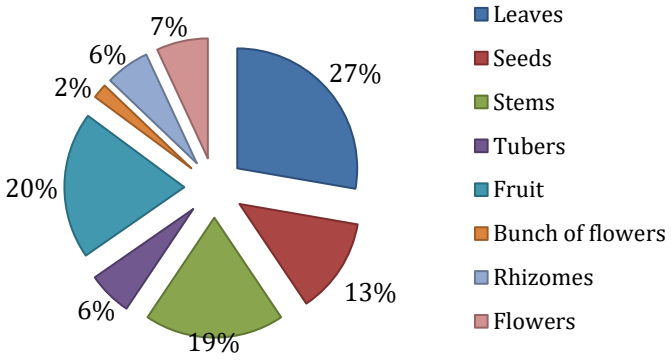

Figure 3. Percentage of plant organs that used

The percentage of plant organs used by the Mandailing Tribe community is leaves from 15 species with a percentage of 27%, fruit organs obtained from 11 species with a percentage of 20, stems obtained from 10 species with a percentage of 19%, seed organs obtained from 7 species plants with a percentage of 13%, flower organs came from 4 plant species with a percentage of 7%, the next organs, namely rhizomes and tubers, came from 3 species each with a percentage of 6% each, and the least part was the stalk organ. flowers come from 1 species with a percentage of 2%.

The number of leaf organs used is due to several factors, including the leaves are part of the plant which are more numerous than other organs such as roots, stems, seeds or flowers. Leaf organs are also the easiest plant parts to take and process. According to Ramadhani *et al.* (2021), the Tamiang Tribe in Aceh Tamiang Regency uses leaf organs as plant organs which are the most widely used in the Tamiang Tribe's traditional wedding ceremony with a percentage of 36%.

The classification of plant species based on where they are obtained can be seen in Figure 4.

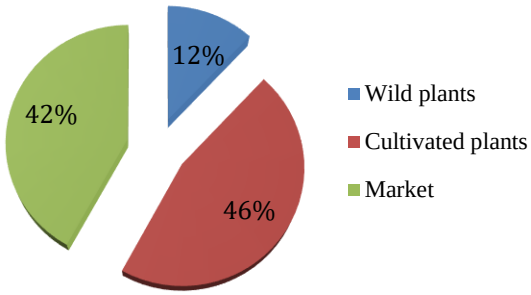

Figure 4. Percentage of places where plants were obtained

Based on where plants were obtained for traditional wedding ceremonies by the Mandailing Tribe in villages around the TNBG area, there were three sources of acquisition, namely cultivated plants, wild plants, and purchased in the market. The percentage of origin obtained from plants as shown in Figure 4.53 shows that cultivated plants are 46%, the percentage of plants

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purchased in the market is 42%, and wild plants are 12%.

The plant species most widely used by the community are cultivated plants in the yard (*alaman*), rice fields (*saba*) and gardens (*kobun*) by 46%. Similar results were also found in the study of Purwanti et al. (2017) on the Saluan Tribe in Tojo Una-Una Regency that cultivated plants are most widely used in traditional wedding ceremonies. Plant cultivation by the community is carried out on the grounds that these plants are plants that have many benefits in everyday life by the community such as pege (Zingiber officinale Roscoe.), sangge-sangge (*Cymbopogon nardus* (L.) Rendle.), *hunik* (*Curcuma longa* L.), and *alas* (*Alpinia galanga* (L.) Willd.) which can be used as spices and medicines.

The Practice of Utilizing the Mandailing Tribe related to Plants in Traditional Wedding Ceremonies

Use of plants used in traditional wedding ceremonies is used as a dish, used as spices, and can be used directly. The plants used in the Mandailing Tribe's traditional wedding ceremony can be seen in Table 2.

Table 2. The use of plants in the Mandailing Tribe's traditional wedding ceremony

No	Dish	Plants used	Processing method
1.	*Sipuluti*	*Harambir* (*Cocos nucifera* L.), *sipulut* (*Oryza sativa* var. *glutinosa* (Lour). Korn.) and *gulo bargot* (*Arenga pinnata* (Wurmb). Merr)	Sipulut are steamed together with pandan so that the aroma is fragrant. *Harambir* is grated and roasted together with *gulo bargot*
2.	*Ombu-ombu*	*Harambir (Cocos nucifera L.)* and spices, namely coriander *(Coriandrum sativum L.), palaga (Amomum compactum Sol. ex Maton), cumin (Cuminum cyminum L.),* star anise *(Illicium verum Hook.f), ulim (Cuminum cyminum L.), Cinnamomum burmanii (Nees & T. Nees) Blume),* and cloves *(Syzygium aromaticum (L) Merr. & LM. Perry)*	*Harambir* is roasted until reddish brown, then put in the spices. Then it is roasted again until it releases a fragrant aroma and is brown-black in color. *Harambir* is roasted, then ground/ground until smooth until it releases oil.
3.	*gule sibodak, gule banana* and *gule hambeng*	*Sibodak* (*Artocarpus heterophyllus* Lam.), *banana* (*Musa* sp.), with the spices	*Sibodak*/bananas are cut and washed to remove the sap. Prepare fine spices in the form of *Lasiak narara, lasiak lamot, pege* and mashed *hunik*. *Harambir* is grated and then squeezed to obtain coconut milk which will later be used as a gravy. The sliced shallots are stirred until wilted, then put in the ground spices and also other spices such as sangge-sangge, base, you can use chopped tamarind or bay leaf, mashed tanaon, ombu-ombu seasoning and then coconut milk. Wait until it boils, then add the sibodak/banana and wait until the gravy thickens.
4.	*Bulung gadung na i duda*	*Bulung gadung (Manihot esculenta* Crantz.*), sangge-sangge (Cymbopogon nardus* (L.) Rendle*), alas* (*Alpinia galanga* (L.) Willd.), bay leaves *(Syzygium polyanthum* (Wight) Walp.*), rimbang (Solanum torvum* Sw.*),* dan *bawang merah (Allium cepa* L.*)*	*Bulung gadung* together with crushed shallots and rimbang. Coconut milk that comes from grated *harambir* is heated together with *sangge-sangge, alas* and bay leaves. After boiling, the pounded Bulung Gadung is put into the coconut milk

There are several plants that are not used as dishes in the Mandailing Tribe's traditional wedding ceremony. However, these plants can be used directly in traditional wedding ceremonies, such as karotes flowers (*Bougainvillea spectabilis* Willd.), *dingin-dingin* (*Kalanchoe pinnata* (Lam.) OKen) and *pining* flowers (*Areca catechu* L.). The practice of using plants without processing can be seen in Table 3.

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Table 3. Utilization of plants in the traditional wedding ceremony of the Mandailing Tribe

No	Use of plants	Plants used	Processing method
1.	Pembungkus *indahan tungkus*	*Banana siolot (Musa sp.), banana sitabar (Musa acuminata x balbisiana* Colla cv.Saba*), banana barangan (Musa acuminata* Colla cv. Lacatan), *banana sibantan (Musa acuminata* Colla cv. Ladys finger*), banana sitalun* (*Musa paradisiaca* L.), *banana siombun (Musa acuminata* Colla cv. Ambon putih*)* dan *bunga karotes* (*Bougainvillea spectabilis* Willd.)	Organ daun banana yang digunakan sebagai pembungkus dalam *indahan tungkus* hanya ujung daunnya saja. Nasi yang dibungkus dengan daun banana berbentuk segitiga. Tali plastik digunakan agar daun tidak lepas ketika dijadikan pembungkus. *Bunga karotes* dijadikan sebagai hiasan dalam *indahan tungkus*
2.	*Yellow Dahanon and pining flower*	*Dahanon (Oryza sativa* L.*), hunik (Curcuma longa* L.*)* dan *bunga karotes (Bougainvillea spectabilis* Willd.*)*	The rhizome of the *hunik* is grated and then squeezed. Soak hunik rhizome juice. Then put the pining flowers together with the yellow branches on a white plate.
3.	Pelepah batang banana dan *dingin-dingin*	Banana stems (Musa sp.) and chilled (Kalanchoe pinnata (Lam.) Oken) wrapping. Karotes flowers are used as decorations in the beauty	The banana stems are cut into 3 parts with a size of ±20 cm and arranged into one pile. Then it *is chilled and* placed on top of the banana stems

The Index Of Cultural Significance (ICS) of Plants in the Mandailing Tribe Wedding Traditional Ceremony

Quantity of plant species utilization is calculated by calculating the Index of Cultural Significance (ICS) value. To find out the value of the importance of the use of plant species in the traditional wedding ceremony of the Mandailing community, the calculation is based on the value of the quality of use (as plants used for traditional ceremonies of *Manulak Sere*, *Pabuat Boru*, *Haroan Boru*¸and *Marsipulut*), intensity of use, and the value of exclusivity or preference for a plant species used. The ICS value indicates the importance of a plant species from very low to very important which has been presented in Table 4.

Table 4. ICS value of plants used in traditional wedding ceremonies

NO	Scientific name	Family	ICS	Predicate
1.	*Piper betle* L.	Piperaceae	96	High
2.	*Areca catechu* L.	Arecaceae	96	High
3.	*Cocos nucifera* L.	Arecaceae	96	High
4.	*Calamus caesius* Blume.	Arecaceae	8	Low
5.	*Arenga pinnata* (Wurmb). Merr	Arecaceae	16	Medium
6.	*Solanum tuberosum* L.	Solanaceae	5	Low
7.	*Nicotiana tabacum* L.	Solanaceae	90	High
8.	*Capsicum annum* L.	Solanaceae	30	Medium
9.	*Capsicum frutescens* L.	Solanaceae	15	Low
10.	*Solanum torvum* Sw.	Solanaceae	6	Low
11.	*Uncaria rhynchophylla* Miq.	Rubiaceae	96	High
12.	*Artocarpus heterophyllus* Lam.	Moraceae	20	Medium
13.	*Musa sp.*	Musaceae	50	High
14.	*Musa acuminata x balbisiana* Colla cv.Saba	Musaceae	20	Medium
15.	*Musa acuminata* Colla cv. Lacatan	Musaceae	15	Low
16.	*Musa acuminata* Colla cv. Ladys finger	Musaceae	15	Low
17.	*Musa paradisiaca* L.	Musaceae	20	Medium
18.	*Musa acuminata* Colla cv. Ambon putih	Musaceae	15	Low

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NO	Scientific name	Family	ICS	Predicate
19.	*Oryza sativa* L.	Poaceae	50	High
20.	*Oryza sativa* var. *glutinosa* (Lour). Korn.	Poaceae	15	Low
21.	*Cymbopogon nardus* (L.) Rendle	Poaceae	30	Medium
22.	*Bambusa vulgaris* Schrad.	Poaceae	32	Medium
23.	*Zingiber officinale* Roscoe	Zingiberaceae	34	Medium
24.	*Curcuma longa* L.	Zingiberaceae	30	Medium
25.	*Alpinia galanga* (L.) Willd.	Zingiberaceae	30	Medium
26.	*Amomum compactum* Sol. ex Maton	Zingiberaceae	20	Medium
27.	*Aleurites mollucana* (L.) Willd.	Euphorbiaceae	2,5	Very low
28.	*Manihot esculenta* Crantz.	Euphorbiaceae	18	Low
29.	*Allium cepa* L.	Amaryllidaceae	40	Medium
30.	*Allium sativum* L.	Amaryllidaceae	40	Medium
31.	*Citrus aurantiifolia* (Christm.)Swingle	Rutaceae	20	Medium
32.	*Syzygium polyanthum* (Wight) Walp.	Myrtaceae	20	Medium
33.	*Syzygium aromaticum* (L) Merr. & LM. Perry	Myrtaceae	20	Medium
34.	*Pandanus tectorius* Parkinson ex Du Roi	Pandanaceae	54	High
35.	*Pandanus amaryllifolius* Roxb.	Pandanaceae	4	Very low
36.	*Bougainvillea spectabilis* Willd.	Nyctaginaceae	20	Medium
37.	*Kalanchoe pinnata* (Lam.) Oken	Crassulaceae	16	Low
38.	*Phaseolus vulgaris* L.	Papilionaceae	15	Low
39.	*Coriandrum sativum* L.	Apiaceae	20	Medium
40.	*Cuminum cyminum* L.	Apiaceae	20	Medium
41.	*Illicium verum* Hook.f	Schisandraceae	20	Medium
42.	*Cinnamomum burmanii* (Nees & T. Nees) Blume	Lauraceae	20	Medium
43.	*Garcinia atroviridis* Griff. Ex T.Anderson	Clusiaceae	10	Low

There are 4 plant species that have a high ICS category (50-99) namely *burangir (Piper betle* L.), sontang (*Uncaria rhynchophylla* Miq.), pining (Areca catechu L.), and timbako (*Nicotiana tabacum* L.). The high ICS value of the plant is influenced by the quality, intensity, and exclusivity of the species. The use of these four plants in the traditional wedding ceremony of the Mandailing Tribe is used at the time of manyurdu burangir. *Manyurdu burangir* is always carried out in traditional Mandailing ceremonies, one of which is a traditional wedding ceremony so that it has a high intensity value. *Burangir* (*Piper betle* L.), *sontang* (*Uncaria rhynchophylla* Miq.), *pining* (*Areca catechu* L.), and *timbako* (*Nicotiana tabacum* L.) are used in the traditional ceremonies of manulak sere, marsipulut, horja pabuat boru, and haroan boru. high quality value. According to the Mandailing people in Huta Padang Village and Huraba I Village, if one of the four plants is not present, the event cannot be held. This proves that *burangir* (*Piper betle* L.), *sontang* (*Uncaria rhynchophylla* Miq.), *pining (Areca catechu* L.), and timbako (*Nicotiana tabacum* L.) have high exclusivity values because they cannot be replaced with other plants. This is in line with the results of research by Sari & Des (2021), people in Taratak, Pesisir Selatan Regency in Minangkabau traditional wedding ceremonies require betel (*Piper betle* L.), gambir (*Uncaria rhynchophylla* Miq.), areca nut (*Areca catechu* L.), and tobacco (*Nicotiana tabacum* L.) in the traditional baimbang tando ceremony (the bride's family meets the groom's family to set a wedding date). The four plant species must not be missing one. If one plant is missing, the event cannot be held.

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Conclusions

The belief system of the Mandailing Tribe in villages around the TNBG area regarding the use of plants at traditional wedding ceremonies has meanings, such as *burangir* (*Piper betle* L.) meaning to agree, *eme* (*Oryza sativa* L.) meaning sincerity of heart, karotes flower (*Bougainvillea spectabilis* Willd.) meaning holy and fragrant, *dingin-dingin* (*Kalanchoe pinnata* (Lam.) OKen) means the coolness of the bride's household, and banana (*Musa* sp.) means starting a household and ending adolescence. The knowledge system of the Mandailing Tribe in villages around the TNBG area related to the use of plants at traditional wedding ceremonies, namely as many as 43 plant species consisting of 20 families have been used in the traditional wedding ceremony of *Manulak Sere, Marsipulut, Horja Pabuat Boru,* and *Horja Haroan Boru*. The most widely used plant family is Musaceae with a percentage of 14%. The most widely used plant habitats were herbs with a percentage of 56%. The most widely used organ is leaves with a percentage of 28%. The origin of the plants obtained is cultivated plants with a percentage of 46%. The use of plants in traditional wedding ceremonies by the Mandailing Tribe is consumed as a dish, and used directly. Based on the quality value, intensity value, and exclusivity value, *burangir* (Piper betle L.), *sontang* (*Uncaria rhynchophylla* Miq.), *pining* (*Areca catechu* L.) and *timbako* (*Nicotiana tabacum* L.) plants have high ICS values, namely 96.

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References

Anggraini, T., Utami, S., & Murningsih. (2018). Kajian Etnobotani Tumbuhan yang Digunakan Pada Upacara Pernikahan Adat Jawa Di Sekitar Keraton Kasunanan Surakarta Hadiningrat. *Jurnal Bologi*, 7(3), 13–20.

Astria, Budhi, S., & Sisillia, L. (2017). Kajian Etnobotani Tumbuhan Obat Padamasyarakat Dusun Semoncol Kecamatan Balai Kabupaten Sanggau. *Biosfer, J.Bio. & Pend.Bio.*, 2(2), 1–9.

Hidayat, M. (2017). Analisis Vegetasi Dan Keanekaragaman Tumbuhan Di Kawasan Manifestasi Geotermal Ie Suum Kecamatan Mesjid Raya Kabupaten Aceh Besar. *Jurnal Biotik*, 5(2), 114–124.

Kholifah, K., Tavita, G. E., & Indrayani, Y. (2020). Etnobotani Ritual Adat Suku Dayak Di Sekitar Hutan Di Desa Datah Dian Kabupaten Kapuas Hulu. *Jurnal Hutan Lestari*, 8(2), 379–395.

Lubis, S. B. (2005). *Hombang Ni Napuran Hobaran Adat Pabuat Boru Dohot Horja Siriaon*. Medan : Media Persada.

Nasution, P. (2012). *Horja Pabuat Boru*. Medan : Yayasan Pencerahan Mandailing.

Purwanti, Miswan, & Pitopang, R. (2017). Studi Etnobotani Pada Proses Ritual Adat Masyarakat Suku Saluan Di Desa Pasokan Kabupaten Tojo Una-Una. *Jurnal Biocelebes*, 11(1), 46–60.

Ramadhani, L., Oktaviani, T., Andriani, Nafsiah, Sihite, R. J., & Suwardi, A. B. (2021). Studi Etnobotani Ritual Adat Pernikahan Suku Tamiang Di Desa Menanggini Kabupaten Aceh Tamiang Provinsi Aceh. *Jurnal Ilmiah Biologi*, 10(1), 80–92.

Sari, R. M., & Des, M. (2021). Etnobotani pada Adat Pernikahan di Taratak Kecamatan Sutera Kabupaten Pesisir Selatan Provinsi Sumatera Barat. *Prosiding SEMNAS BIO 2021*, 407–414.

Triwahyudi, A. J. P. dan H. (2017). Dinamika Perkembangan Etnis Di Indonesia Dalam Konteks Dynamics Of Ethnic Development In Indonesia In The Context Of. *Jurnal Populasi*, 25(1), 64–81.

Turner, N. (1988). The Importance of a Rose : Evaluating The Cultural Significance of Plants in Thompson and Lillooet Interior

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ISSN 2460-6804(online)
DOI: https://doi.org/10.24114/jbio.v8i2.36497

Salish. *Journal of American Anthropologist*, 90, 272–290.

Zubair, Suleman, S. ., & Ramadhanil. (2019). Studi Etnobotani Tumbuhan Obat Pada Masyarakat Kaili Rai Di Desa Wombo Kecamatan Tanantovea Kabupaten Donggala Sulawesi Tengah. *Jurnal Biocelebes*, 13(2), 182–194.