Ethnobotany of traditional wedding: a comparison of plants used by Bugis, Palembang, Sundanese and Karo ethnic in Indonesia

Isna Rasdianah Aziz\(^1\)*, Anita Restu Puji Raharjeng\(^2\), Susilo\(^3\), Jamilah Nasution\(^4\)

\(^1\)Department of Biology, Universitas Islam Negeri Alauddin Makassar, Gowa, South Sulawesi, Indonesia. 92113
\(^2\)Department of Biology, Universitas Islam Negeri Raden Fatah Palembang, Palembang, South Sumatera, Indonesia. 30126
\(^3\)Department of Biology Education, Universitas Muhammadiyah Prof. Dr. Hamka, East Jakarta, DKI Jakarta, Indonesia. 13830
\(^4\)Faculty of Biology, Universitas Medan Area, Medan, North Sumatera, Indonesia. 20112

*isna-rasdianah@uin-alauddin.ac.id

Abstract. Various ethnic in Indonesia including Bugis, Palembang, Sundanese and Karo utilize plants species in their traditional wedding processions as a science of ethnobotany. This study aims to identify and compare the most widely used plant species, the parts of the organ used, and their meaning. The method used is descriptive explorative through semi-structured interviews using open-ended question. The results show there are four plants of same species that most widely used by the four ethnic groups: \textit{Piper betle}, \textit{Oryza sativa}, \textit{Pandanus amaryllifolius} and \textit{Musa} sp. in every traditional wedding processions. Ethnic communities still cultivate these plants to prevent extinction in their regions.

1. Introduction

Plant diversity in Indonesia is an extraordinary source of natural wealth and invaluable. This potential can provide great benefits and profit for the community if they can be utilized and explored optimally. Indonesia has a tropical climate [1] with fertile soil, thus many types of plants can grow and adapt to the soil [2]. Plants in Indonesia are used to meet the needs of life [3], such as for the needs of clothing, food, boards, drugs, cosmetics, pesticides and spiritual experience [4]-[5]. Knowledge is obtained based on practical experience and unwritten knowledge, which is passed on from generation to generation [6].

Indonesia is a pluralistic nation, consisting of various ethnic groups, religions and languages [7]. The number of ethnic groups in Indonesia as a whole reached more than 1,300 ethnic groups with each local wisdom inherited from generation to generation [8]-[9]. Natural wealth is used by various ethnic groups in traditional ways that have not been fully explored and developed [10].

Ethnobotany studies the views of community about nature through filters of trust, knowledge and purpose, and how they imagined the use, cultivation and utilization opportunities of resource, especially the plant [11]-[13]. The plants usage is a basic knowledge that very important in maintaining their survival [14]. But in line with the changing ecosystem in which they live, changes in the environment,
communication and information from the outside, causing cultural values that have been growing in the community are also developing [15].

Each ethnic has a different marriage ceremony but does not leave the elements of tradition. This difference occurs because of the habit of an ethnic that has been passed down from generation to generation. The four tribes examined in this study are four major ethnic in Indonesia, namely: Bugis, Palembang, Sundanese and Karo. Therefore, it is necessary to do research on plant species, meaning, and how to use plants in the traditional wedding ceremonies of the four ethnics.

2. Methodology
This research was conducted in four provinces in Indonesia, including South Sulawesi (Bugis ethnic), South Sumatra (Palembang ethnic), West Java (Sundanese ethnic) and North Sumatra (Karo ethnic) (Fig.1). This type of research is descriptive explorative methods. The research sample was taken using purposive sampling technique [16]. Data collection was obtained through semi-structured interviews using open-ended question. Data processing and analysis was carried out to obtain information about the plants species, the parts of the plants used, and the symbol meaning of these plants in the traditional wedding ceremonies of the four ethnics.

![Map of Bugis, Palembang, Sundanese and Karo ethnic territories in Indonesia](image)

Figure 1. Map of Bugis, Palembang, Sundanese and Karo ethnic territories in Indonesia

3. Result and Discussion
The results showed that the four ethnic studied were Bugis, Palembang, Sunda, and Karo still preserving the traditional wedding processions. Various types of plants are most widely used in traditional wedding of four ethnic, as in table 1 below:

| No. | Ethnic | Name | Scientific name | Organ used | Type of wedding ceremony | The meaning of plant usage |
|-----|--------|------|-----------------|------------|--------------------------|---------------------------|
| 1.  | Bugis  | Betel| Piper betle     | Leaf       | Mappasiarekkeng; mappuonre balanca; cemme passili | A symbol of tribute to the bride family; Symbol of shame/pride as the bugis culture of upholding the honor and shame |
|     | Palembang | Betel| Piper betle     | Leaf       | Sirih panyapo; berasan  | A symbol to take and give; as a symbol that both of family have bonded themselves to one family |
|     | Sundanese | Betel| Piper betle     | Leaf       | Wedding ceremony; ngseyuuk Seureuh; Narosan (ngalamar/nyeureuhan) | Symbol of prosperity; symbolizing if there is excess fortune must be shared; the propose ceremony |
|     | Karo    | Betel| Piper betle     | Leaf       | Pinangan                 | As the tepa salira (introductory sign against representatives of the families sent out and also to honor to the kalimbubu |
| 2.  | Bugis  | Rice | Oryza sativa    | Seeds      | Mappanre botting; Mappasau | Grain sown to the groom as a symbol of prosperity; The bride is treated by mappasau so that the body becomes fresh |
|     | Palembang | Rice | Oryza sativa    | Seeds      | Cavalcade of the groom  | A symbol of prosperity |
3.2 Types and uses of plants in four ethnic traditional wedding procession

Traditional wedding procession of four ethnic groups: Bugis, Palambang, Sundanese, and Karo are generally divided into three parts, namely pre-wedding, weddings ceremony and post-wedding. The four
ethnic communities utilize the same four species in the three parts of each traditional wedding procession with different characteristics and meanings (Table 1).

Sirih (Piper betle L.), Familia Piperaceae, Ethnic name: gapura, siri (Bugis); siriel, siri, suruh (Palembang); seureuh (Sundanese); belo (Karo). Morphology: semi-wood, dioecious, betel stems are greenish brown, round, segmented. Single leaf with heart-shaped, tapering at tip, flat leaf margin, curved nervatio, leaves about 2.5-10 cm wide, 5-18 cm long, alternating, and emitting a pungent flavor when squeezed.

In Bugis culture, betel leaves are used in three pre-wedding processions: mappasiarekkeng, mappasiarekbalanca and cemme passili. Mappasiarekkeng (mappetu ada) is a decision-making process and talks related to the implementation of marriage, such as the determination of the wedding date, wedding costs, types of clothing and others. Mappasiarekbalanca is a process of bringing a batch of money as wedding cost according to the agreement between the family of prospective groom and the prospective bride at mappasiarekkeng. This procession usually joins with mappasiarekkeng process. In this procession, the groom brings betel leaves to the bride’s family as a symbol of honors. The two prospective bride and groom do cemme passili, bathing with certain ingredients as a begging to God to be kept away from all kinds of dangers. In this procession, betel leaves are used in bath ingredients as a symbol of self-esteem.

Palembang culture applies betel leaves in berasan and sirih panyapeo processions. Berasan is a pre-wedding process means counseling or deliberation. In this berasan, both of prospective bride and groom family discuss the continuation of the wedding plan while carrying betel leaves as a gift. Betel panyapeo is a procession at the wedding ceremony, the bride gives betel leaves to her husband as a symbol in their family life they will give and receive each other.

Ngueuyeuk seureuh and narosan are pre-wedding processions in Sundanese culture. Narosan is a propose process to prospective bride carried out by the groom parents and his close family, as a starting point for a further relationship. The prospective groom family carries betel leaves shaped triangular and tapered down as a symbol of prosperity hope for the bride and groom later. Ngueuyeuk seureuh is held a day before the wedding ceremony at the bride’s house. Both the prospective bride and groom ask for their parents’ blessings. Through this procession, parents also give advice through the symbols of objects, including betel leaves as a symbol for sharing the happiness. In Karo culture, betel leaves are used in pinangan (maba belo selambar). The maba belo selambar is a ceremony to propose a woman according to Karo tradition to ask about the willingness of the woman, her parents and all of her closest relative. The groom parent brought betel leaves as a symbol of honor for the bride’s family.

Rice (Oryza sativa), Familia Poaceae, Ethnic name: berre (bugis); beras (Palembang); pare (Sundanese); piaru (Karo). Morphology: rooted fibers, short stems, lanceolate leaves, light green to dark green, first leaf is coleoptile, rectinervis, the spikelet consist of a short stalk, oval and thick, grain weighs about 10-50 mg and 3-15 mm long.

In Bugis culture, rice are used in mappasau (pre-wedding) dan mappaanre botting (wedding ceremony). A few days before the wedding is held, the prospective bride will be treated with mappasau (steam bath) using a potion of bedda lotong (black powder) made from scorched fried rice and pounded until smooth. This event aims to make the body fresh. Whereas the use of rice in mappaanre botting with sprinkling rice grains to the groom by the bride family as a symbol of prosperity. Mappaanre botting means accompanying the groom to the bride’s house by using traditional clothing (bodo costume). Mappaanre botting also took place in Palembang ethnic wedding at the cavalcade of the prospective groom to the prospective bride house.

Sawer panganten in Sundanese wedding done by sprinkling a number of small objects that are of special significance carried out by parents of the two brides, including rice that symbolizes prosperity and happiness to the marriage couple. In Karo culture, rice also are used in pemasu-masun tumbuk erdemu baya procession. After the statement of the marriage promise, the priest took pihir rice (white rice), placed it on the bride head and prayed for the bride and family to be given an abundance of grace, sustenance, health and longevity and peace from God.
Screw pine (*Pandanus amaryllifolius*), *Familia Pandanaceae*, Ethnic name: *pondang* (Bugis); *pandan wangi* (Palembang); *pandan seungit* (Sundanese); *pandan jau* (Karo). Morphology: elongated leaves, spiny, aerial root and thick, fruit head varies ovoid, green leaves, used as fragrances, food coloring, and ornamental plants.

In Bugis culture, screw pine leaves are used in two wedding processions: *mappasau* dan wedding ceremony. The bathing ingredients of prospective brides (*mappasau*) consist of screw pine leaves, so that the body gives off a fragrant aroma. In addition, screw pine leaves are clamped to the bride's bun (*simpolo tatton*) as a head accessory with *bodo* costume. *Simpolo tatton* implies an upright bun, meaning that Bugis women have a high dignity in society. The screw pine leaf slices strengthen the bun, not to sway, stay upright and balance. In Palembang culture, screw pine leaves are applied in one wedding procession namely *cacap-cacapan*. This procession is part of the wedding ceremony where the parents of the groom rub the flower water to the sinciput and forehead both of brides. Representing a prayer and advice to the bride and groom to think calmly as clear as water, think positively, high intention, and consistently maintain a good dignity. Screw pine leaves are sliced and placed on the bride-bed as a symbol of manners.

As in the Bugis tradition (*mappasau*), screw pine leaves in Sundanese culture utilized as bath ingredients of the bride and groom in siraman procession, implying a symbol of inner self purify before the wedding. Both parents will pour the *siraman* water into the *bokol* (a large concave and wide-brimmed container made of metal). Then *siraman* starts from the mother of bride, father, and followed by the elders. Likewise, at wedding ceremony, screw pine leaves are used on the Sundanese bride bun (*puspasari* bun), the hair is filled with slices of screw pine leaves then trimmed with hairnet. Besides causing a fragrant aroma, this screw pine slice keeps the bun symmetrical and sturdy. Karo culture utilizes screw pine leaves in wedding ceremony. Screw pine leaves are a rice container (*perakan*). The leaves are arranged in such a way to form screw pine webbing. This container is filled with rice and brought by invited guests as gifts to the marriage couple representing a symbol of prosperity.

Banana (*Musa* sp.), *Familia Musaceae*, Ethnic name: *otti* (Bugis); *punti* (Palembang); *cau* (Sundanese); *galuh* (Karo). Morphology: pseudostem, sympodial, underground stem called corm, green spiral leaf, blunt blade at the tip, tapered, parthenocarpy, generally have no seeds.

Bugis culture applies banana in *mappaenre balanca*, *mappaenre botting* and *mappacci*. In *mappaenre balanca* and *mappaenre botting* procession, the groom family brought a bunch of banana fruit as gifts and symbols of appreciation to bride and her entire family. However, bananas offered are not common banana (*Musa paradisiaca*), but the plantains (*Musa sapientum*). *Mappacci* is a pre-wedding procession as a reflection night and purification tradition for bride. The prospective bride raised her palm on a pillow as a symbol of manners.

The propose tradition in Palembang culture is the visit of prospective groom family to the prospective bride’s home to determine the wedding date (*memutus kato*). They brought the gifts wrapped and placed on trays. A bunch of banana fruit is one of the gifts offered to prospective brides as a symbol of prosperity. While Sundanese culture shows banana usage in *nguyeuk seureuh* and wedding ceremony. The plantains and banana leave used as ingredients for *parawanten* (*sajen*), meaning that the bride and groom will live well and happily anywhere. In Karo culture, the invited guests could find banana fruits presented in the wedding ceremony procession and served during the wedding parties, thus the invited guests can enjoy them as dessert.

4. Conclusion
The results showed that four ethnic groups: Bugis, Palembang, Sundanese and Karo still preserve the traditional wedding processions in this modern era, including pre-wedding, wedding ceremony and post-wedding. There are four plants of same species that most widely used by the four ethnic groups, namely *Piper betle*, *Oryza sativa*, *Pandanus amaryllifolius* and *Musa* sp. Ethnic communities still cultivate these plants with the aim of preventing extinction in their respective regions.
References

[1] Murdiyarso D Kauffman J B Warren M Pramova E and Hergoualc’h K, 2012, Tropical wetlands for climate change adaptation and mitigation, Bogor: Center for International Forestry Research.

[2] Lande, M. L. Suratman, U. Bambang, I dan Joko G, 2008, Pemetaan dan Potensi Ekonomi Tanaman Obat di Desa Sumber Agung Gunung Betung Tahun Abdul Rachman, in Prosiding Seminar Nasional Sains dan Teknologi-II, (Bandar Lampung: Universitas Lampung).

[3] Walujo E B, 2008 Research Ethnobotany in Indonesia and the Future Perspectives Biodiversitas, J. Biol. Divers. 9, 1 p. 59–63.

[4] Setyowati F M, 2010 Etnofarmakologi dan Pemakaian Tanaman Obat dalam Kesehatan Media Litbang Kesehat. 20, 3 p. 104–112.

[5] Aziz I R, 2012 Variasi morfologi averrhoa carambola L. di Daerah Istimewa Yogyakarta, J. Penelit. Kesehat. 6, 1 p. 102–106.

[6] Supriati R Juniarti T and Astuti R R S, 2013 Tumbuhan obat yang dimanfaatkan oleh masyarakat Desa Suka Rami Kecamatan Air Nipis Kabupaten Bengkulu Selatan, Konserv. Hayati 9, 2 p. 33–43.

[7] Suparlan P, 2002 Menuju Masyarakat Indonesia yang Multikultural Antropol. Indon. 69, 1 p. 98–105.

[8] Ruhimat M, 2017 Peningkatan Pemahaman Wawasan Kebangsaan Melalui Literasi Geografis Pros. Semin. Nas. Tah. Fak. Ilmu Sos. Univ. Negeri Medan 1, 1 p. 78–82.

[9] Na’im A and Syaputra H, 2011, Kewarganegaraan, suku bangsa, agama, dan bahasa sehari-hari penduduk Indonesia, Jakarta: Badan Pusat Statistik Republik Indonesia.

[10] Oktora L Kumala R Pengajar S Studi P and Universitas F, 2006 Pemanfaatan Obat Tradisional Dengan Pertimbangan Manfaat dan Keamanannya Maj. Ilmu Kefarmasian 3, 1 p. 1–7.

[11] Pramita N H Indriyani S and Hakim L, 2013 Etnobotani Upacara Kasada Masyarakat Tengger, Di Desa Ngadas, Kecamatan Poncokusumo, Kabupaten Malang, J. Indones. Tour. Dev. Stud. 1, 2 p. 52–61.

[12] Geldern R von H in S, 2017 Kerbau dalam tradisi megalitik etnis Batak di Sumatera Utara Berk. Arkeol. Sangkhakala 19, 1 p. 64–72.

[13] Karunakara N Rao C Ujwal P Yashodhara I Kumara S and Ravi P M, 2013 Soil to rice transfer factors for226Ra,228Ra,210Pb,40K and137Cs: A study on rice grown in India J. Environ. Radioact. 118 p. 80–92.

[14] Ruhimat M, 2017 Peningkatan Pemahaman Wawasan Kebangsaan Melalui Literasi Geografis Pros. Semin. Nas. Tah. Fak. Ilmu Sos. Univ. Negeri Medan 1, 1 p. 78–82.
[23] Sormin E U Supriana T and Sihombing L, 2013 Analisis tingkat pengetahuan petani terhadap manfaat lahan padi sawah di kabupaten serdang bedagai J. Soc. Econ. Agric. Agribus. 1, 1 p. 1–14.

[24] Morrell E, 2002 Desentralisasi atau Separasi? Suatu Tinjauan dari Sulawesi Selatan Antropol. Indones. 68, 1 p. 13–24.

[25] Iptika A, 2014 Keterkaitan kebiasaan dan kepercayaan mengunyah sirih Pinang dengan kesehatan gigi J. Masyarakat, Kebud. dan Polit. 3 p. 64–69.

[26] Wakte K V. Nadaf A B Thengane R J and Jawali N, 2009 Pandanus amaryllifolius Roxb. cultivated as a spice in coastal regions of India Genet. Resour. Crop Evol. 56, 5 p. 735–740.

[27] Buerki S et al., 2016 Biogeography and evolution of the screw-pine genus Benstonea Callm. & Buerki (Pandanaceae) Candollea 71, 2 p. 217–229.

[28] Sulistiono B, 2015 Islam dan tamaddun melayu: menatap masa depan Sos. Budaya 11, 1 p. 104–114.

[29] Fuller D Q and Madella M, 2009 Banana cultivation in South Asia and East Asia: A review of the evidence from archaeology and linguistics Ethnobot. Res. Appl. 7, 1 p. 333–352.