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RESEARCH ARTICLE

ANNONATED CHECKLIST OF TRADITIONAL MEDICINAL PLANTS USED BY THE MELANAU COMMUNITY IN BALINGIAN, MUKAH SARAWAK MALAYSIA

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ABSTRACT

The purpose of this study was to document Melanau knowledge of medicinal plants in Balingian, Mukah, Sarawak. Information was obtained from semi-structured interviews, personal conversations with practitioners and direct observations. Our data covered 43 species of medicinal plants belonging to 28 families. We found that most species are for post-natal (10 species) and hypertension (7 species), disorders which are prevalently and primarily treated with medicinal plants. In the treatments, the plants are used mainly as food and drinks (*Averhoa carambola*, *Carica papaya*, *Nephrolepis bisserata*, *Cocos nucifera*, *Centella asiatica* and *Curcuma longa*), medicinal baths and externally. Fast disappearance of the traditional culture and natural resources due to urbanization and industrialization suggests that the unrecorded information may be lost forever. Thus, there is an urgent need to record this valuable Melanau medicinal knowledge and keep it for the next generation.

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INTRODUCTION

Medicinal plants are either wild or cultivated plants which can be used for medical purposes directly or indirectly, owing to their active ingredients. According to Leeuwenberg (1987), traditional medicine, like conventional medicine has only one objective, i.e. restoring the physical and mental wellbeing of the patient. The plants are trees, herbs and shrubs (Cheah, 1999). Nowadays, there are many kinds of disease that infects on humans. Despite modern medical treatments, traditional ways of treatment are also concerned with preventing and curing ailments. According to Fasihuddin (1993), there are many medicinal plants such as Tongkat Ali, Kacip Fatimah and Mengkudu being utilized by the rural people. *Cassia alata* has been widely used by ethnic groups in the treatment of ringworm and other similar skin diseases. In all traditional medicines, plants play a major role because historically, they were the only medicines known (Kassim x

Osman et al., 2002), for example, Tongkat Ali (*Eurycoma longifolia*), Senduduk (*Melastoma malabatricum*) and Akar Angir (*Xantophyllum wrayi*) (Weety, 1997). There are many factors that influence use of plants as medicine such as soil, climate and many more. Today, traditional knowledge and practices contribute to 40% of commonly prescribed medicines throughout the world finding their origins directly or indirectly in plants or animals (Fasihuddin and Ghazally, 2003).

MATERIALS AND METHODS

This study was carried out in Balingian, Mukah, Sarawak (Figure 1). This area has five villages namely Kampung Kuala, Kampung Suyung, Kampung Pulat, Kampung Masjid, and Kampung Lintang. The Melanau community was selected in this study because it is the majority community in this area and still practises traditional medicine. Until now there has been no specific study on the medicinal plants of the Melanau community in Balingian, Mukah. Information on medicinal plants was obtained from semi-structured interviews, as described by Cotton (1996), personal conversations with

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practitioners and direct observations as described by Etkin (1993). Information on the plants and their medicinal plant uses was obtained from the village headman, traditional healers and other knowledgeable informants living in this village.

Plant specimens were collected with the help of local informants to ensure that correct specimens were obtained for taxonomic identification and future scientific investigation. Plant identification has been done at Herbarium, Department of Forestry, Universiti Putra Malaysia Bintulu Sarawak Campus.

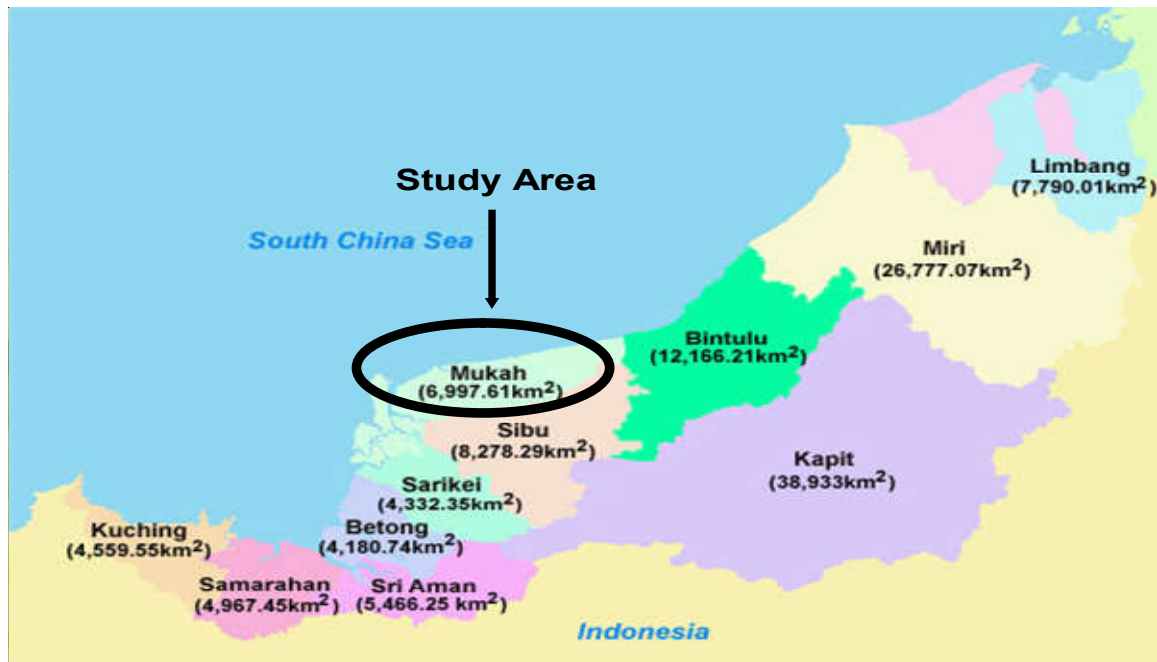


Figure 1. Study site

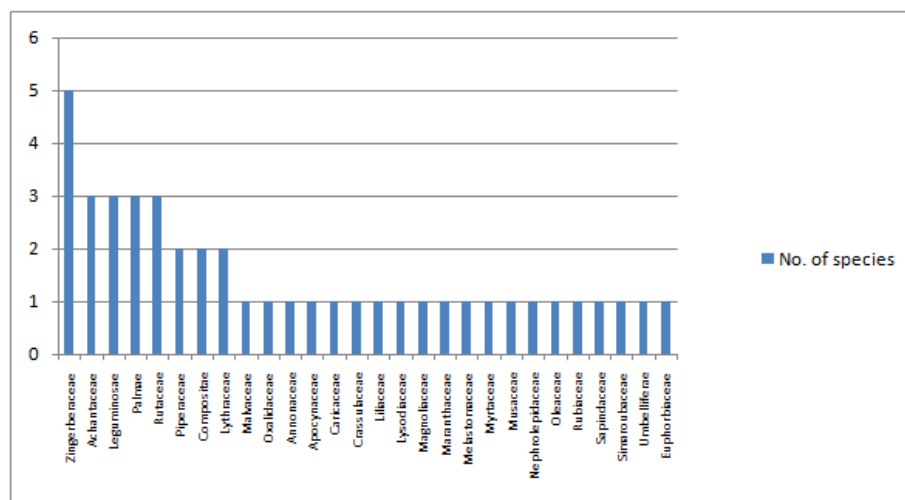


Figure 2. Relative number of species per family used as medicinal plants by the Melanau

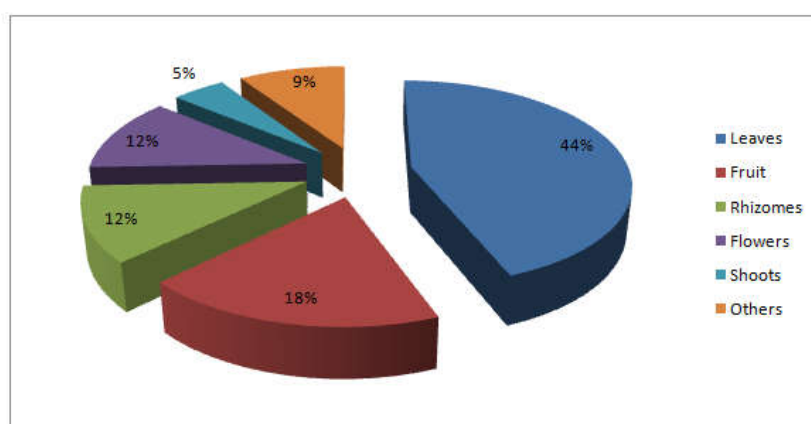


Figure 3. Parts Used

Table 1. Medicinal plants used by the Melanau community in Balingian, Mukah Sarawak Malaysia

Scientific name	Family	Local name (Melanau dialect)	Part used	Uses
<i>Achantus illicifolius</i>	Achantaceae	Geligei	Leaves	For small wound
<i>Aloe barbadensis</i>	Annonaceae	Lidah buaya	Leaves	For burns, pain and infection from pimples, acne and insect bites
<i>Alpinia galanga</i>	Zingiberaceae	Lengkuah	Rhizomes	Flavouring agent, medicine, food
<i>Annona muricata</i>	Annonaceae	Dian Belanda	Leaves	To reduce high blood pressure and body odour
<i>Areca catechu</i>	Palmae	Pineing	Seed	For postnatal treatment, stomachache, toothache, diarrhoea
<i>Averhoa carambola</i>	Oxalidaceae	Belimbin	Young Leaves	To reduce blood pressure
<i>Blumea balsamifera</i>	Compositae	Sambung	Leaves	For postnatal treatment (stomachache, fever)
<i>Carica papaya</i>	Caricaceae	Kepayah	Leaves	To treat malaria, reduce high-blood pressure
<i>Centella asiatica</i>	Umbelliferae	Pegagak	Leaves	To reduce high blood pressure, aging, fever
<i>Citrus aurantifolia</i>	Rutaceae	Limau asem	Fruit	For postnatal treatment, to remove dandruff, coughs, sore throat
<i>Citrus hystrix</i>	Rutaceae	Limau Purut	Fruit	For postnatal treatment, to remove dandruff, smoothen skin
<i>Citrus microcarpa</i>	Rutaceae	Limau Kapah	Fruit	For slimming, coughs
<i>Cocos nucifera</i>	Palmae	Benyoh	Fruit	As massage oil (baby, adult), to treat chicken pox, reduce body temperature, blacken hair, as skin moisturizer, to promote healthy hair
<i>Cosmos caudatus</i>	Compositae	Rancah-rancah	Leaves	Antiaging, digestion
<i>Curcuma longa</i>	Zingiberaceae	Kunyit	Rhizomes	Flavouring agent, to treat fungus and disease, postnatal, treatment influenza, to release dirty blood in the body, diarrhoea, joint pain and antiaging
<i>Donax grandis</i>	Marantaceae	Bemban	Leaves	To treat shingles and as eyewash
<i>Euphorbia tirucalli</i>	Euphorbiaceae	Akar Kuali	Leaves	For small wounds
<i>Eurycoma longifolia</i>	Simaroubaceae	Tongkat Ali	Rhizomes	As tonic
<i>Hibiscus rosa-sinensis</i>	Malvaceae	Bunga Gambir	Flowers	To reduce body temperature (children), blacken and keep hair smooth
<i>Jasminum sambac</i>	Oleaceae	Bunga Malur	Flowers	To drive away evil spirits usually by the village shaman
<i>Justicia gendarussa</i>	Achantaceae	Sebangun	Leaves	For postnatal treatment (stomachache)
<i>Kaempferia galanga</i>	Zingiberaceae	Sekuih	Rhizomes	For postnatal treatment (stomachache)
<i>Kalanchoe pinnata</i>	Crassulaceae	Setawar	Leaves	To reduce body temperature (fever)
<i>Lawsonia inermis</i>	Lythraceae	Serega	Leaves	For nail disease (fungicide)
<i>Lysodium microphyllum</i>	Lysodiaceae	Cempaka Apuk	Flowers	To drive away evil spirits usually by the village shaman
<i>Melastoma malabathricum</i>	Melastomaceae	Berusak	Flowers	For pimple scars, small wounds
<i>Michelia alba</i>	Magnoliaceae	Gelegayuk	Flowers	To drive away evil spirits usually by the village shaman
<i>Morinda citrifolia</i>	Rubiaceae	Mengkudu	Leaves and fruit	For swellings, high blood pressure, sprain, diabetes, coughs, asthma
<i>Momordica charantia</i>	Sapindaceae	Periak	Leaves and fruit	To reduce high blood pressure, fever
<i>Musa sapientum</i>	Musaceae	Balek	Leaves	To reduce body temperature
<i>Nephrolepis bisserata</i>	Nephrolepidaceae	Kebeng	Leaves	For postnatal treatment (release dirty blood)
<i>Nypa fruitcans</i>	Palmae	Nyipak	Fruit	To reduce body temperature
<i>Orthosipon aristatus</i>	Achantaceae	Misai Kuching	Leaves	To reduce high blood pressure
<i>Parkia speciosa</i>	Leguminosae	Petai	Seed	To reduce high blood pressure
<i>Piper betle</i>	Piperaceae	Sepak	Leaves	For allergy, stomach-ache, diarrhea, dysentery
<i>Piper samentosum</i>	Piperaceae	Kaduk	Leaves	For post-natal treatment (to get rid of 'wind')
<i>Plumeria obtusa</i>	Apocynaceae	Bunga Pahouk	Flowers	To drive away evil spirits usually by the village shaman
<i>Psidium guajava</i>	Myrtaceae	Berabas	Leaves	For feminine wash
<i>Senna alata</i>	Leguminosae	Daun tarum	Leaves	For skin infections and ringworm
<i>Sonneratia caseolaris</i>	Lythraceae	Buak Pedada	Fruit and shoots	To reduce blood pressure
<i>Tamarindus indica</i>	Leguminosae	Asem Jawa	Seed	To reduce body temperature (fever), for coughs, slimming
<i>Zingiber cassumunar</i>	Zingiberaceae	Bonglai	Rhizomes	For postnatal treatment
<i>Zingiber officinale</i>	Zingiberaceae	Lia apuk	Rhizomes	For postnatal treatment, blood circulation, period pains, swellings, sprains

For all informants we recorded gender, age, profession and any other information concerning to their background. Further data recorded included local names of plant, plant used, part used, processing, recipes and even the time of year when plants were used.

RESULTS AND DISCUSSION

The medicinal plants studied belong to 28 families, with forty percent (40%) of the species belonging to Zingiberaceae (five species), Achantaceae (three species), Leguminosae (three species), Palmae (three species) and Rutaceae (three species) as shown in Figure 2. This study show that leaves are the most widely used part of the plant, accounting for 44% of the reported medicinal plants used, followed by fruit (18%), rhizomes and flowers (12%), and shoots (5%). (Figure 3). Trees (28%) are also the most popular type of medicinal plants used followed by herbs and shrubs (21%), palms (6%), ferns (4%) and climbers (2%). For the treatments, the plants mainly used are as food (soup, salad), drinks (*Averhoa carambola*, *Carica papaya*, *Nephrolepis bisserata*, *Cocos nucifera*, *Centella asiatica* and *Curcuma longa*), medicinal baths and as postpartum treatments. Medicinal bath is an external treatment that is used not only to cure disease, but also to maintain health.

There are many advantages of taking a external medicinal bath. First, the effective components of the medicine can act directly on an externally infected or diseased region. It is particularly important for the treatment of skin diseases, detoxification, healthy hair growth, and as an essential therapy for post-natal health. Mostly, Melanau women take medicinal baths for a month after giving birth in order to eliminate 'wind', which is believed to enter, or develop, during the birthing process and to be capable of seriously compromising the health of the mother. All these 43 species of medicinal plants were reported to be used for more than 20 types of health problems. Most of the plants recorded in this study were found to be used for treating postnatal (10 species) and high blood pressure symptoms such as headache (8 species). *Cocos nucifera* L., *Centella asiatica*, *Zingiber officinal*, *Curcuma longa*, *Alpinia galanga*, *Kaempferia galanga* and *Zingiber cassumunar* were the most frequently used for post-natal treatment. Medicinal plants used by the Melanau community in Balingian, Mukah Sarawak are shown in Table 1.

Conclusion

This research showed that plants play an important role in the Melanau daily life. There were 43 species of medicinal plants identified as used by the Melanau who utilize the plants as medicine also as food and ornamentals.

Our study has contributed to the traditional medicinal plant knowledge of the Melanau's in Balingian, Mukah Sarawak. It is worth noting that some young people still retain the traditional knowledge or at least has expressed interest in the traditional uses because they performed well as key informants. Knowledge of the plants as remedies is apparently the result of transmission from the old to the new generation. The fast disappearance of their traditional culture and natural resources due to urbanization and industrialization suggests that unrecorded information may be lost forever. Thus, there is an urgent need to uncover and preserve valuable Melanau medicinal knowledge and encourage it to be transferred to the next generation. Traditional knowledge should therefore be featured more often in the agendas of nature reserves besides biological richness as a valuable asset for the future.

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