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# Ethnobotanical Study of Medicinal Plants Utilized by Local Communities in Kereng Bangkirai

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**Abstract.** Kereng Bangkirai is an area with rich biological resources and strong local knowledge related to the use of medicinal plants. This ethnobotanical knowledge has been passed down through generations and plays an important role in maintaining community health. This study aimed to identify medicinal plant species utilized by local communities in Kereng Bangkirai, including the plant parts used and methods of preparation. The research employed a descriptive qualitative design using an ethnobotanical survey approach. Data were collected through semi-structured interviews with key informants, field observations, and documentation. The results showed that the local community utilizes various medicinal plant species from different families to treat minor illnesses and for daily health care. Leaves were the most frequently used plant parts, followed by rhizomes and roots, with simple preparation methods such as boiling and infusion. This study highlights the importance of preserving local ethnobotanical knowledge as part of biodiversity conservation and the development of traditional medicine.

**Keywords:** ethnobotany, medicinal plants, local knowledge, Kereng Bangkirai

## Introduction

Indonesia is widely recognized as a country with high biological diversity, including a wide variety of medicinal plants traditionally used by local communities (Balick & Cox, 2015; Rahayu & Rustiami, 2016). The utilization of medicinal plants represents an important component of local wisdom and has long been practiced as an alternative or complementary approach to modern medicine (Pieroni & Vandebroek, 2017). Ethnobotanical studies play a crucial role in documenting the relationship between humans and plants, particularly in the context of medicinal plant use (Martin, 2015).

The Kereng Bangkirai area has ecological conditions that support the growth of diverse plant species, both wild and cultivated. Local communities continue to maintain traditional medicinal practices by utilizing plants available in their surrounding environment (Nugroho & Sudarsono, 2018). However, social and environmental changes may lead to the gradual loss of this traditional knowledge. Therefore, ethnobotanical documentation of medicinal plants in Kereng Bangkirai is necessary to support the conservation of local knowledge and biological resources (Cunningham et al., 2018).

Ethnobotanical research also contributes to strengthening scientific literacy and promoting biodiversity-based local wisdom in education and conservation contexts (Haen et al., 2025; Zannah et al., 2025). Accordingly, this study aimed to identify medicinal plant species utilized by the Kereng Bangkirai community, the plant parts used, and their preparation methods in traditional medicine.

## Method

*Research Design*

This study employed a descriptive qualitative research design with an ethnobotanical survey approach.

*Study Area and Period*

The research was conducted in the Kereng Bangkirai area. The study period was adjusted to field conditions and informant availability.

Informants

Informants were selected purposively and included community elders, traditional healers, and residents with knowledge of medicinal plant use.

*Data Collection Techniques*

Data were collected through semi-structured interviews, direct field observations of medicinal plants, and documentation in the form of photographs and field notes.

*Data Analysis*

Data were analyzed descriptively by categorizing medicinal plant species based on family, plant parts used, and preparation methods.

## Results and Discussion

*Medicinal Plant Species Utilized by the Community*

Based on interviews and field observations, several medicinal plant species commonly used by the Kereng Bangkirai community were identified. The utilization of these plants reflects a close relationship between local knowledge and the surrounding environment, consistent with ethnobotanical studies conducted in other regions of Indonesia (Sujarwo et al., 2016; Rahayu & Rustiami, 2016).

**Table 1. Medicinal Plants Utilized by Local Communities in Kereng Bangkirai**

| No | Local Name | Scientific Name | Family | Plant Part Used | Main Use | Preparation Method |
|---|---|---|---|---|---|---|
| 1 | Sambiloto | *Andrographis paniculata* | Acanthaceae | Leaves | Fever reduction, immune support | Boiled |
| 2 | Turmeric | *Curcuma longa* | Zingiberaceae | Rhizome | Digestive disorders | Grated and infused |
| 3 | Ginger | *Zingiber officinale* | Zingiberaceae | Rhizome | Warming the body, cough relief | Boiled |
| 4 | Betel | *Piper betle* | Piperaceae | Leaves | Antiseptic, oral health | Boiled |
| 5 | Meniran | *Phyllanthus niruri* | Phyllanthaceae | Whole plant | Immune enhancement | Boiled |
| 6 | Cat's whiskers | *Orthosiphon aristatus* | Lamiaceae | Leaves | Urinary tract health | Infused |

Leaves were the most frequently utilized plant parts, as they are easily accessible, renewable, and considered relatively safe for use (Tardío & Pardo-de-Santayana, 2015). Similar utilization patterns have been reported in other ethnobotanical studies across Southeast Asia (Cámara-Leret & Dennehy, 2019). Preparation methods were generally simple, such as boiling or infusion, aiming to extract active compounds using traditional techniques.

Medicinal plant knowledge in Kereng Bangkirai is primarily acquired through intergenerational transmission and empirical experience. However, modernization and lifestyle changes may reduce reliance on traditional medicine (Albuquerque et al., 2019). Therefore, systematic documentation and promotion of ethnobotanical knowledge are essential to support biodiversity conservation and the sustainability of local wisdom (Zannah & Purtina, 2024).

## Conclusion

The results of this study indicate that local communities in Kereng Bangkirai utilize a variety of medicinal plant species as part of traditional health practices. Leaves were the most commonly used plant parts, and preparation methods were generally simple. This ethnobotanical knowledge represents an important cultural and biological asset that should be preserved through documentation and further research.

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