ETHNOBOTANY OF MEDICAL PLANTS IN THE COMMUNITIES AROUND THE GUNUNG LEUSER NATIONAL PARK RESORT CINTA RAJA, SUMATERA UTARA PROVINCE

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ABSTRACT

The ethnobotany research on medicinal plants around Gunung Leuser National Park aims to determine the types of medicinal plants commonly used by the community around the TNGL area of the Cinta Raja resort and to determine the types of medicinal plants originating from the GLNP area. This study used a survey method by choosing one key person. The method used to collect plant species in Kawan TNGL is the cruising method and determining the location of the meeting point of medicinal plants. Data analysis using descriptive method. The study found 54 types of plants used as traditional medicine by the community around the TNGL Resort Cinta Raja area. The most widely used medicinal plant species were from the Zingiberaceae group, with as many as 10 species. The most common types of medicinal plants taken from forest areas are yellow roots.

INTRODUCTION

National Parks with the main constituent components are forests, which are the most important components for the life of animals and wildlife contained therein. The relationship between wildlife and plants is two-way. Most of the wildlife depends on the forest mainly as a place to live, a source of food, and other activities. The life cycle of forest plants also depends a lot on wildlife such as flower pollination, seed dispersal, and other processes carried out by wild animals, one of which is the orangutan (Rangkuti et al., 2012).

Gunung Leuser National Park (GLNP) is one of the areas included in the tropical rainforest which of course has high biodiversity. This high biodiversity status makes the TNGL area has unique flora and fauna such as the Sumatran Elephant, Sumatran Tiger, Sumatran Rhino, and Sumatran Orangutan. This diversity forms an ecosystem that influences each other. Of course, with this biodiversity, GLNP has become a storehouse of enormous potential as a genetic natural resource. This potential is very possible to be used for the benefit of the wider community with allowed rules. Even the people around the forest have been using the plants that live in GLNP for a long time for traditional herbal medicines for generations.

Ethnobotany can be used as a tool to document the knowledge of traditional communities, and ordinary people who have used various kinds of plant services to support their lives. Knowledge of plants is used as life support for food, medicine, building materials, traditional ceremonies, culture, dyes, and others. All community groups according to the character of the region and their customs are dependent on various plants, at least for food sources. In modern life, more than a hundred types of plants have been known as

food sources, but actually, thousands of plant species have been used in various parts of the world by various ethnic groups (Suryadarma, 2008).

Ethnobotany knowledge is found in many traditional tribes in Indonesia which is the result of interacting, processing and being used to using forest plants. Forest management with traditional knowledge of forest sustainability will be achieved if local communities are involved in management activities. It is feared that the effect of the change will cause traditional knowledge to decline or even disappear. The loss of traditional knowledge will cause local communities to no longer to know how to manage forest resources sustainably. Ethnobotanical knowledge is one indicator of the sustainable use of forest plants. The decline in ethnobotanical knowledge is the beginning of forest degradation due to the decreasing role of local institutions in carrying out sustainable forest use (Pei, 2013).

This ethnobotanical survey activity is part of the main activity, namely the inventory and monitoring of biodiversity in forest areas. It is necessary to present data and basic information (baseline) in a time series at least once every ten years (Perdirjen P10/KSDAE/SET/KSA.0 /9/2016). The purpose of the monitoring and monitoring is to obtain basic data that can be used for structuring the area, management planning, evaluating the suitability of functions, and various other aspects of national park management. Specifically, the purpose of the ethnobotanical survey of the medicinal garden is to find out the types of medicinal plants commonly used by the community around the TNGL area of the Cinta Raja resort and to find out the types of medicinal plants originating from the GLNP area.

LITERATURE REVIEW

Ethnobotany can be used as a tool to document traditional community knowledge, ordinary people who have used various types of plants to support their lives. As life support such as for the benefit of food, medicine, building materials, traditional ceremonies, culture, coloring materials, and others. Documentation of ethnobotanical research results eventually becomes a means of communication and preservation of knowledge of traditional communities spread all over the world. Ethnobotany which is based on human life in the use of plants that are around it can increase human life power.

Collection of ethnobotanical data in the field through emic (knowledge) and ethical (science) approaches. In this anthropological approach, structured and semi-structured interviews were conducted. Two types of questions were conducted in the interviews, namely Open-Ended Questions, namely questions that describe the options for the interviewee to respond. In answering this type of question, they can provide free and open responses or answers. Open-ended questions are addressed to the highest community leaders. Closed-Ended Questions, it is easier for the interviewer to control the interviewee, because what will be asked is certain and the interviewee avoids answering freely. answers can be multiple choice.

In determining the key informants can be done by means of purposive sampling. Criteria for key informants (key person) is the person who is the oldest or is considered to know the most about medicinal plants. Communities living around the area can also be used as data sources to complement field data later. Information about the use/utilization of a type of plant can also be obtained through interviews with several respondents by selecting respondents using snowball sampling. Respondents are people who live around the area.

METHOD

This research was carried out from November to December 2020 in Tangkahan Village, Pancasila Hamlet, and the Gunung Leuser National Park Resort Cinta Raja Forest Area. The method used to collect data on medicinal plants that are often used by the community is by interviewing key persons and the public as users of medicinal plants. The key person in this study is a healer/shaman from Tangkahan Village. The sample in this study was 15 people from Tangkahan Village and Pancasila Subvillage. The method used to collect plant species in Kawan GLNP is the cruising method and determining the location of the meeting point of medicinal plants. Data analysis using descriptive method.

RESULTS AND DISCUSSION

Data collection of medicinal plants used by the community around the Gunung Leuser National Park Resort Cinta Rakyat was carried out by two methods. Collect plant data commonly used by the community by survey and interview methods. Interviews were conducted with 10 people from the Pancasila Subvillage and Tangkahan Village. The interview results obtained 54 types of plants used as medicines, which were grouped into 26 families (Table 1). Research on the use of plants by the Karo people has also been carried out by Sembiring et al., (2015), where the Karo people around the Tongkoh Forest Area use 113 species of

plants as medicines. Research on the use of medicinal plants conducted by Silalahi et al., (2010) stated that the Karo people in the village of Kaban Tua, Munthe District, used 152 species of plants as medicines.

There are several types of plants that cannot be identified. Such as making scrub medicine which consists of several types of young grass, namely grass in its seedling period. Then the wound medicine consisting of 7 leaves provided that these leaves do not have fine hairs on the leaf surface or the back. Mrs. Nondong Nangin as the Key Person also stated that "all plants in the forest can be used as medicine, as long as they are more than five years old". This shows that the Karo people use many types of plants in their daily lives.

Most people in Pancasila and Tangkahan hamlets have started to abandon traditional medicine because the manufacturing process takes longer than using modern medicine. In addition, in the manufacturing process, there are also those that take a little longer because they must be dried in the sun first. This was also expressed by Suharyanto, (2019), the Karo people who are in the Lingga area stated that the manufacture of these traditional medicines could not be made in a short time. The manufacture of these medicines also takes into account the weather in the village, because some of the ingredients used to make this medicine must be partially dried in the sun to dry, during the rainy season it will be difficult for the medicine maker to dry the concoctions.

Table 1. Types of plants used as medicines by the community around Gunung Leuser National Park, Cinta Raja Resort.

Family	Species	Lokal Name	Used	Used Part
Acanthaceae	*Andrographis paniculata*	Sambiroto	Fever	Leaf
Amaryllidaceae	*Allium schoenoprasum*	Pia kencur (bawang batak)	Take a cold	Tubers
	Allium sativum L	Bawang putih	Dental medicine/boils	Tubers
			Kidney stones	Tubers
Anacardiaceae	*Semecarpus* sp	Ranggas	itchy rash	twigs
Apocynaceae	*Tylophora* sp	Tawar ipoh	itchy rash	Leaf
Araceae	*Caladium sp*	Keladi	itchy rash	midrib
Aracaceae	*Cocos nucifera*	Kelapa hijau	Streamlining blood flow	fruit
	Calamus sp	Rotan	Bone medicine	bark
	Arenga pinnata	Aren	Diabetes	sap
Asteraceae	*Ageratum conyzoides* L	Telu dagang	Clotting blood/wound medicine	Leaf
			Wound medicine	Leaf
			Diarrhea medication	Leaf
	Tithonia diversifolia	Pait-paitan	Wound medicine	Leaf
Cranichideae	*Macodes sp*	Gurat Nibata	Medicine and rituals	Leaf
Ctassulaceae	*Crassulaceae sp*	Steram	stomach ache	Leaf
Euphorbiaceae	*Jatropha curcas*	Jarak	fever	Leaf
	Aporusa prainiana King	Kayu molu tua	Bone medicine	Stem
Fabaceae	*Bauhinia acuminata*	Takature	Medicine for nodules in children	Leaf
	Quercus sp	Cepcepan	stomach ache	bark
Lamiaceae	*Plectranthus amboinicus*	Terbangun (epifit seperti combrang)	stomach ache	Leaf
Loganiaceae	*strychnos sp*	Kayu ular	Bone medicine	Leaf
Malvaceae	*Ceiba pentandra*	Kabu-kabu (randu)	Fever	Leaf
Menispermaceae	*Coscinium sp*	Akar kuning	hepatitis	Stem
Moraceae	*Ficus parietalis*	Bening-bening	Pinworms	Leaf
	Antiaris toxicaria	Daun tawar ripoh	The antidote	Leaf
	Artocarpus odoratissimus	Terap	Diabetes	Leaf
Myristicaceae	*Myristica fragrans*	Pala	Bone, lever	Fruit
Piperaceae	*Piper nigrum*	Merica	blood clots	Fruit
		Merica hitam,	Kidney stones	Fruit
	Pipper sp.	Sirih ungu	Kidney	Leaf
	Piper aduncum	Akar sirih hutan (belasih)/ akar lilit	Cataract	Root
	Piper ornatum	Sirih merah	Medicine for all diseases	Leaf
	Piper betle	Sirih	Medicine for all diseases	Leaf
Poaceae	*Lophatherum sp*	Kembal pusuh	Body immunity	Leaf

		(rumput batu)		
	Cymbopogon citratus	Serei	facilitating urination	Stem
	Bambuseae	Bunga bambu,	kidney stones	Flower
	Oryza sativa	Beras	Medicine for all diseases	Fruit
Rubiaceae	*Tarenna pulchia*	Stekap	stomach ache	Leaf
			stomach ache / heart	Leaf
Rutaceae	*Citrus sp*	Limau kayu	Preservative	Fruit
	Citrus aurantifolia	Jeruk nipis	Fever	Fruit
	Citrus hystrix	Jeruk purut	Kidney Stones	Leaf
Simaroubaceae	*Eurycoma longifolia*	Tongkat ali/pasak bumi	Fever	Leaf, Stem
			Malaria	Leaf, Stem
Solanaceae	*Nicotiana tabacum*	Daun suntil-suntil, ,	diarrhea	Leaf
	Physalis angulata	Ciplukan	Fever for Baby	Leaf
Violaceae	*Rinorea sp*	Tawar	Stomach	Root
	Rinorea sp	Tawar pus pus	Fever and eye	Root
Vitaceae	*Vitis gracilis*	Gagatan harimau	Nyeri dada	Leaf
Zingiberaceae	*Curcuma sp*	Kunyit gajah	Take a cold for kids	Rhizome
	Alpinia striata Hort	Cekala cabang	stomach ache	Root
	Kaempferia galanga	Kencur	Kidney Stones;	Rhizome
			Fever for Kids	Rhizome
	Zingiber officinale var rubrum.	Jahe merah	Kidney Stones	Rhizome
			Malaria	Rhizome
	Amomum compactum	Mambu laga	Kidney Stones	Rhizome
	Curcuma zanthorrhiza	Temu lawak	Kidney Stones	Rhizome
			Malaria	Rhizome
	Boesenbergia rotunda	Temu kunci	Kidney Stones	Rhizome
	Boesenbergia rotunda	Temu kunci	Baby	Rhizome
			Malaria	Rhizome
	Curcuma heyneana	Temu gajah	Kidney Stones	Rhizome
			Fever	Rhizome
			stomach ache	Rhizome
	Curcuma zedoaria	Temu pait	Fever	Rhizome
			Take a cold,	Rhizome

Based on table 1, the most widely used species are from the Zingiberaceae family (10 species) and followed by the Piperaceae family (5 species). Most of the plant species used are cultivated plants obtained from the market and from farming (Figure 1). According to research, medicinal plants that are often used by the community, in general, are cultivated plants, with the aim of making them easy to obtain when needed, this was also expressed by a resident named Nabar, "If we have a fever, we just buy medicine more often, it's easy and fast. ".

Research conducted by Nahdi & Kurniawan, (2019) states that the people in the Wonokerto area around Mount Merapi, Yogyakarta use the most medicinal plants of the Zingiberaceae type, namely as many as 7 species. The same thing was also found by Anggraeni et al., (2016) in the Batak community in the Peadudung area who used Zingiberaceae species as medicines, namely as many as 6 species

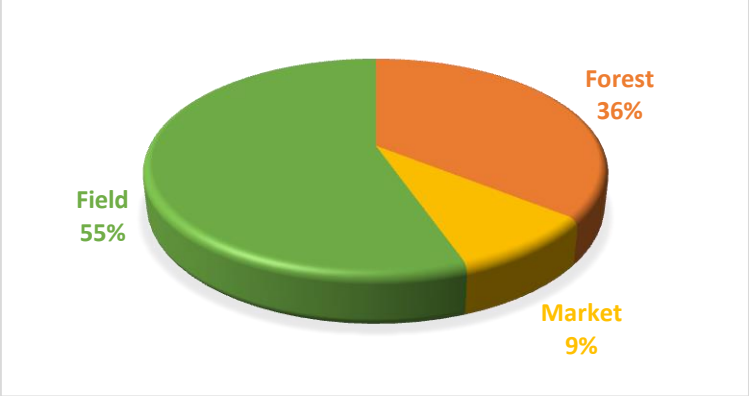

Figure 1. Where the community obtains medicinal plants

The results of a survey conducted in the Gunung Leuser Resort Cinta Raja National Park area, obtained 12 types of plants commonly used by the community as medicines (Table 2).

Table 2. Types of Medicinal Plants Found in the TNGL Resort Cinta Raja Area

Family	Species	Local Name
Asteraceae	*Ageratum conyzoides* L	Telu dagang
Cranichideae	*Macodes sp*	Guratan nibata
Fabaceae	*Quercus sp*	Cep-cepan
Menispermaceae	*Coscinium sp*	Akar kuning
Moraceae	*Artocarpus odoratissimus*	Terap
Piperaceae	*Piper aduncum* L	Akar lilit
	Piper sp	Sirih Ungu
	Piper ornatum	sirih merah
Rubiaceae	*Tarenna pulchia*	Stekap
Simaroubaceae	*Eurycoma longifolia*	Pasak bumi
Vitaceae	*Vitis gracilis*	Gagatan harimau
Zingiberaceae	*Zingiber* sp	jahe-jahean

The discovery of medicinal plants in the GLNP area was based on information from local people who often enter forest areas. The most common type obtained from the forest is from the Piperaceae family (2 species). One type of medicinal plant that is most often sought after today is the root of the yellow. According to Heyne (1987), Yellow root has the characteristic of yellow wood, its uses are decoction of stems to treat jaundice, digestion, intestinal worms, strong medicine/tonic, fever, menstrual laxative, and canker sores. On large trunks or branches, there are hanging fruit bunches, and yellow fruit; the fruit consists of a slimy pulp, and large, flat seeds that can be used to anesthetize fish. In addition, according to Subiandono & Heriyanto, (2016), this plant has uses as a dye and a poison producer which is classified as an insecticide.

Yellow root is taken not only for medicinal needs but also traded at prices reaching Rp. 650,000 rupiah/kg. This could be a threat to the preservation of the Kunining roots in the GLNP area. Yellow root seekers are generally not familiar with this plant. It is not uncommon to find several types of lianas in the forest which are cut down but then abandoned, because they are not a type of yellow root. Not a few piles of wood from this type of yellow root are on the edge of the forest because of the wrong feeling. Medicinal plants found in the area are widely distributed within, as shown in Figure 2.

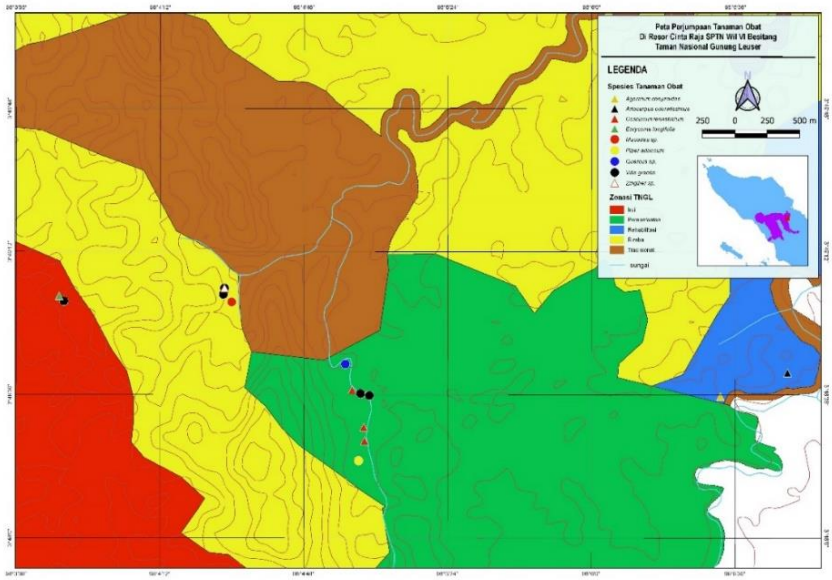

Figure 2. Distribution of Medicinal Plants in Gunung Resort Cinta Raja National Park

CONCLUSION

1. Found 54 plant species used as traditional medicine by the community around the TNGL Cinta Raja Resort area
2. The most widely used types of medicinal plants are from the Zingiberaceae group, namely 10 species.
3. The most common type of medicinal plant taken from the forest is Akar Kuning

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