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Identification of Medicinal Plants in State Islamic University of Kiai Haji Achmad Siddiq Jember

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Abstract Medicinal plants are all forms of plants that are known to possess medicinal characteristics that are effective in both promoting health and treating sickness. On the basis of human observations, these medicinal plants have been discovered and are known to have a substance that is effective for preventing and treating illness and is capable of performing certain biological functions. However, information on the sorts of medicinal plants found in the area of UIN KHAS Jember is limited. This research tries to investigate medical plant species and plant components that may be utilized as medications. The qualitative descriptive method used in this study will characterize the medicinal plants discovered (taxonomy, family morphology, parts used, and how to use them). This investigation was carried out utilizing field survey and documentation techniques. As a result, 13 families with 16 species of medicinal plants may be found near UIN KHAS Jember. There are members of the *Annonaceae*, *Euphorbiaceae*, *Bromeliaceae*, *Solanaceae*, *Piperaceae*, *Lamiaceae*, *Zingiberaceae*, *Myrtaceae*, *Rutaceae*, *Moringaceae*, *Pandanaceae*, *Arecaceae*, and *Xanthorrhoeaceae* families, based on the identification findings. The most abundant medicinal plants in UIN KHAS Jember is the *Arecaceae* family with the species name *Cocos nucifera* L, which way to consume it is by drinking the water.

Keywords: Medicinal plants, State Islamic University, Kiai Haji Achmad Siddiq, Identification, *Arecaceae*

INTRODUCTION

Jember is one of the cities in East Java with a tropical climate, with temperatures ranging from 23°C to 32°C, a land size of 3,293,34 km², and an elevation between 0 and 3,330 meters above sea level (Setiawan, 2013). The Kiai Haji Achmad Siddiq Jember State Islamic University or UIN KHAS Jember is a green and ecologically friendly region situated in the city of Jember's education core area. UIN KHAS Jember has a land size of 180,000 square meters. At the end of the previous year, there were two additional hectares of land available. Jl. Mataram No.1, Karang Miuwo, Mangli, Kec. Kaliwates, Jember Regency, East Java 68136 is the location of UIN KHAS Jember.

The presence of the UIN KHAS Jember campus, which has a large diversity of plant species, creates safe, healthy, and aesthetically pleasing environmental conditions, allowing it to host a variety of academic, non-academic, and associated activities. The increasing number of plants around the environment can create a lot of biomass that can be used for various things, for example to make compost (Nasution & Rizka, 2022). Numerous plant species, particularly street shade plants and aesthetic plants, are nourished by the circumstances generated. The majority of these plant groupings consist of medicinal trees.

Traditional medicine is therapy and/or treatment that is based on experiences and abilities that have been handed down from generation to generation and are administered in conformity with the existing social standards. Traditional remedies are substances or ingredients in the form of plant ingredients, animal ingredients, mineral ingredients, essence preparations (gelenik), or mixes of these materials that have been used to treat based on experience for centuries (Zukulfi, 2004).

Medicinal plants include all types of plants that are known to have health-promoting and disease-treating characteristics. Medicinal herbs are closely tied to traditional medicine since the majority of their usage has not been based on clinical laboratory testing, but rather on experience of use (Harmida et al., 2011). Medicinal plants are species of plants that are well-known, reputable, and actually effective as medicines (Utami, P. & Puspaningtyas, E., 2013). The definition of an effective medication is that it includes active compounds that operate to treat specific illnesses, or that it does not contain the resulting / synergistic effects of several substances that serve to treat specific diseases (Indriati, 2014).

From the viewpoints of several experts, it can be stated that medicinal plants are plants that are recognized, trusted, and shown to be able to sustain and even treat health conditions. Traditional medicinal plants consist of six plants that have been confirmed to possess therapeutic characteristics, have been processed traditionally by the community in the past, and have been handed down from generation to generation.

Identification of plants may be regarded as the process of revealing and identifying the identification or identity of plants, in this instance through determining the right plant

name and its proper categorization system placement. Classification is the organization of taxonomic levels used to ease the classification of living organisms. Observing the characteristics or morphological traits of the species' roots, tubers, rhizomes, stems, leaves, and other plant components is the first step in identification and classification; these characters may be employed in the identification process. It is likely that the plants to be recognized are unknown to the scientific community, hence the establishment of a new name or taxon level must adhere to the KITT guidelines (International Code of Plant Nomenclature). Utilizing plant specialists, specimens, herbariums, flora books, or determination keys, recognizable plants may be recognized (Tjitrosoepomo, 2009).

METHOD

The conducted research falls under the category of qualitative descriptive research, which aims to describe, interpret, and explain research data collected in a systematic, factual, and accurate manner regarding the truth, facts, and properties of medicinal plants with a tree-like growth habit in the UIN KHAS Jember campus environment.

This study was done in UIN KHAS Jember, Jl. Mataram No. 1, Karang Miuwo, Mangli, Kec. Kaliwates, Jember Regency, East Java 68136. Identifying various flora and taking photographs by using digital cameras, noting it in stationery, notebooks, and essential reference materials such as Plant Morphology: Gembong Tjitrosoepomo (2005) were used for this investigation.

The research requires medicinal plants identified at the location of the study. The sampling technique involves collecting samples and photos. The sample technique employs the roaming approach, which involves strolling around the study site or investigating each research region.

The study design consisted of two phases: the selection of research locations and plant collection procedures, which included obtaining samples and photographs of the whole organs and their various sections, as well as the identification phase.

FINDINGS AND DISCUSSION

Based on field observations, fifteen species of medicinal plants from thirteen families were identified. This will be explored in depth in Table 1.

Table 1. Identified types of medicinal plants based on their families

No.	Family	Species name	General name	Local name
1.	<i>Euphorbiceae</i>	<i>Manihot esculenta</i> crantz.	Cassava	Ketela pohon, Pohong
2.	<i>Bromeliaceae</i>	<i>Ananas comosus</i> L. Merr.	Pineapple	Nanas

3.	<i>Solanaceae</i>	<i>Solanum melongena</i> L.	Eggplant	Terong, terung
4.	<i>Piperaceae</i>	<i>Piper betle</i> L.	Betel	Sirih, suruh, sireh
5.	<i>Lamiaceae</i>	<i>Ocimum basilicum</i>	Basil	Kemangi
6.	<i>Zingiberaceae</i>	<i>Zingiber officinale</i>	Ginger	Jahe
7.	<i>Zingiberaceae</i>	<i>Kaempferia galanga</i>	Aromatic ginger	Kencur
8.	<i>Myrtaceae</i>	<i>Syzygium paniculatum</i>	Red shoots	Pucuk merah
9.	<i>Psidium</i>	<i>Psidium guajava</i>	Guava	Jambu biji
10.	<i>Annonaceae</i>	<i>Annona muricata</i> L.	Soursop	Sirsak
11.	<i>Rutaceae</i>	<i>Citrus histrix</i>	Lime	Jeruk purut
12.	<i>Moringaceae</i>	<i>Moringa oleifera</i>	Moringa	Kelor
13.	<i>Pandanaceae</i>	<i>Pandanus amaryllifolius</i>	Fragrant Pandan	Pandan
14.	<i>Arecaceae</i>	<i>Cocos nucifera</i>	Coconut	Kelapa
15.	<i>Xanthorrhoeaceae</i>	<i>Aloe vera</i> L.	Aloe vera	Lidah buaya

According to the findings of the interviews, the medicinal plant species gathered by the researcher were used as the primary element in traditional medicine by the population around the UIN KHAS Jember campus. As demonstrated in the Table 2, the vast majority of medicinal plants undergo the same treatment in terms of processing, presentation, and usage.

Table 2. Types of medicinal plants and how to use them

Types of Medicinal Plants	General name	Organs Used	How to Use	Traditionally Treatment for
<i>Manihot esculenta</i> crantz.	Cassava	Tubers	Boiled and eaten like rice	Diabetes, Diarrhea, Infections, Fertility Problems, and Induce labor.
<i>Ananas comosus</i> L. Merr.	Pineapple	Fruit	Eaten raw	Constipation and Nausea
<i>Solanum melongena</i> L.	Eggplant	Fruit	Steamed	Constipation and Flatulence
<i>Piper betle</i> L.	Betel	Stems and Leaves	Boiled then brewed	Diabetes Mellitus, Hepatitis, Kidney stones, Uric Acid, Cancer, Hypertension, Vaginal Discharge, Ulcers, Joint Pain
<i>Ocimum basilicum</i>	Basil	Leaves	Eaten raw	Lung cancer, Liver cancer, Oral cancer, Skin cancer
<i>Zingiber officinale</i>	Ginger	Rhizome	Boiled then brewed	Pain, Cramps, General Inflammation
<i>Kaempferia galanga</i>	Aromatic ginger	Rhizome	Boiled then brewed	Flu and Cough Symptoms
<i>Syzygium paniculatum</i>	Red shoots	Leaves	Boiled then brewed	Kills Bacteria in Food that cause Stomach Ache
<i>Psidium guajava</i>	Guava	Leaves	Eaten raw or Boiled	Cancer, Thyroid, Stress, Lower Blood Sugar Levels

<i>Annona muricata L.</i>	Soursop	Leaves	then brewed Boiled then brewed	Canker Sores, Uric Acid, Hypertension, Cholesterol, Insomnia, Cancer
<i>Citrus histrix</i>	Lime	Fruit	Boiled with warm water then brewed	Flu and Gastrointestinal Diseases
<i>Moringa oleifera</i>	Moringa	Leaves	Cooked	Diabetes
<i>Pandanus ammaryllifolius</i>	Fragrant Pandan	Leaves	Boiled with warm water then brewed	Heart, Vision, Cancer, Skin Health
<i>Cocos nucifera</i>	Coconut	Fruit	Drunk like plain water	Diarrhea, Indigestion, Constipation, Worms, Bladder Infections, Kidney Disorders
<i>Aloe vera L.</i>	Aloe vera	Leaves	Boiled with warm water	Digestion, Lower Blood Sugar, Relieve Canker Sores

As many as 19,918 medicinal plants are utilized by 525 traditional healers from 96 ethnic groups in Indonesia (Balitbangkes, 2015). Following is a list of medicinal plants found near the UIN KHAS Jember campus. As it is common knowledge that excessive consumption of anything has a negative effect, excessive consumption of herbal medicine will result in a variety of adverse effects, including gastrointestinal disturbances (nausea, vomiting, diarrhea, stomach ulcers, stomach acid), allergies, risk of bleeding, mouth irritation, headaches, and even destruction of red blood cells and white blood cells (Kurniawati, 2021). It can be seen that when herbal medicines are used properly, they cause relatively minor side effects. Considerations for the use of herbal medicines include the correctness of the drug, the correct dosage, the correct time of use, the correctness of the method of use, the correctness of obtaining information, the absence of misuse, and the correctness of choosing drugs for specific diseases (Sumayyah, 2017).

According to the results of a study on the identification of medicinal plants at UIN KHAS Jember, there are. Even though there were only a few members in a few families, the number of plant species obtained demonstrated a high level of diversity. The diversity of these medicinal plants can be seen from the total number of species found, namely there are species belonging to families. These families are *Euphorbiaceae*, *Bromeliaceae*, *Solanaceae*, *Piperaceae*, *Lamiaceae*, *Zingiberaceae*, *Myrtaceae*, *Annonaceae*, *Rutaceae*, *Moringaceae*, *Pandanaceae*, *Arecaceae*, and *Xanthorrhoeaceae*.

CONCLUSION

Based on the results of the identification that was conducted in the campus environment of UIN KHAS Jember, 1,232 medicinal plants with a tree habit were identified. These

medicinal plants belonged to 15 species and 14 families, including *Euphorbiceae*, *Bromeliaceae*, *Solanaceae*, *Piperaceae*, *Lamiaceae*, *Zingiberaceae*, *Myrtaceae*, *Annonaceae*, *Rutaceae*, *Moringaceae*, *Pandanaceae*, *Arecaceae*, and *Xanthorrhoeaceae*. The most prevalent therapeutic plants are members of the *Arecaceae* family, including the species *Cocos nucifera* L.

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