

PHILIPPINE SCIENCE HIGH SCHOOL WESTERN VISAYAS

Dña Lawaan H. Lopez Campus
Bitoon, Jaro, Iloilo City

ETHNOBOTANICAL STUDY OF MEDICINAL PLANTS IN BARANGAY GUINOBATAN, LEGANES, ILOILO

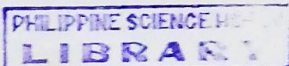
A Research Paper Presented to the
Faculty of the Philippine Science High School Western Visayas
Iloilo City

In Partial Fulfillment
of the Requirements in
Science Research II

by

Zenith Montel
Melinda Unajan
F.S. Lopez

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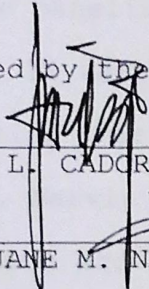
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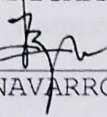
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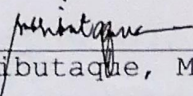
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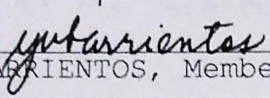
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Abstract

The study aimed to establish the ethnobotanical classification of medicinal plants in Brgy. Guinobatan, Leganes, Iloilo. It further determined the uses of these medicinal plants as well as the methods of preparation for medicinal purposes. Interview conducted among the folks of Brgy. Guinobatan, Leganes, Iloilo served as the basis of the ethnobotanical classification. Representatives of these plants were collected and preserved. Results of the study were subjected to mode as descriptive statistical test.

This study was able to identify forty one medicinal plants in the study area. Seventeen ailments have been considered to be cured, singly or collectively, by these medicinal plants. Most of these plants are useful for headaches. Kalooy (*Citrus hystrix*) is the plant with the most number of ailments treated. There were nine ways by which the medicinal plants can be prepared with poultice as the most prevalent, followed by preparation by boiling.

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ETHNOBOTANICAL STUDY OF MEDICINAL PLANTS IN BARANGAY GUINOBATAN, LEGANES, ILOILO

Chapter 1

Introduction to the Study

Background of the Study

A basic knowledge of plant classification is necessary for understanding the relationships that exist between morphology and anatomy. When classification schemes were first developed, all living organisms could easily be placed in a general category like Kingdom Plantae.

General categories, such as kingdoms, still work well in classification, but they break down when some organisms in one category have characteristics which are similar in another category.

In 1969, Whittaker proposed the five kingdom system which is now followed by many biologists. In the Whittaker classification system (Brown, 1998), three kingdoms of more complex organism are classified to three forms of nutrition: photosynthetic, food ingestion, and food absorption.

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Plants grow mostly on tropical places. The Philippines is a tropical country where plants are abundant. It produces different kinds of plants every year--trees, crops, tropical fruits, and rice. Since rice is the main product, many places in the Philippines produce rice among other crops.

Leganes, the town nearest to Iloilo City when one goes north, is surrounded by different kinds of plants. It grows rice, crops, flowering plants, medicinal plants and many others. Most of these plants were not yet classified by taxonomists or even researchers.

Guinobatan, a barrio in Leganes, is just one proof of the abundant supply of plants for everybody. It has so many plants, but these were not yet known. Folks use these plants for diverse purposes. Some of these plants were used for medicinal purposes, but these were not yet classified. That is why the researchers wanted to classify these plants according to the uses and to the names given by these folks.

The relationship between the variables in the study is presented in Figure 1.

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INDEPENDENT VARIABLE

DEPENDENT VARIABLE

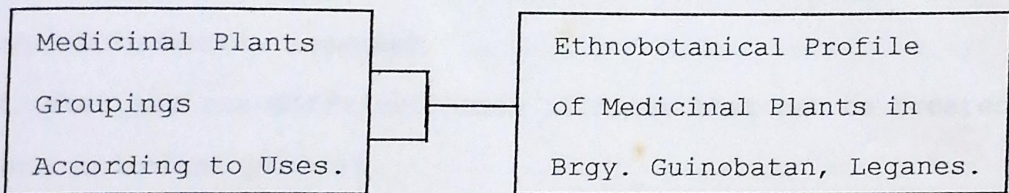


Figure 1. Ethnobotanical profile of medicinal plants in Brgy. Guinobatan, Leganes, based on medicinal uses.

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Statement of the Problem

The study aimed at establishing the ethnobotanical classification of medicinal plants in Brgy. Guinobatan, Leganes, Iloilo. It further determined the uses of these medicinal plants as well as the methods of preparation for medicinal purposes.

Specifically, it answered the following questions:

1. What is the ethnobotanical profile of the medicinal plants in Brgy. Guinobatan, Leganes?
2. What are the different human ailments that can be treated by these medicinal plants?
3. What are the prevalent methods of medicinal plant preparations of the folks in the study area?

Significance of the Study

Medicinal plants were used hundreds of years ago. Most of the pharmaceutical drugs nowadays were made from extracts of medicinal plants. Research continues on discovering wild medicinal plants that are yet untapped for their medicinal uses so that these can be made into pharmaceutical drugs.

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Plants' common names vary from region to region. For this reason, researchers establish the scientific names of plants for purposeful identification, thus, avoid rising confusion among readers.

In addition to discussing folklore or historical uses of the plants, each ethnobotanical entry describes any testing that has been done, the parts of the plants used, and the compounds that are responsible for its medicinal benefits--a complex problem, for a plant's effect may actually result from an interaction of its many compounds (Weil, 1993).

A return to natural healing, the use of organic medicines is the need of our time. The prices of manufactured drugs are high. Their availability is not always assured. We need practical remedies for our common ailments. We must rediscover the healing elements in nature. However, these medicinal plants could be just as effective in their natural forms, direct from the garden or backyard. Their leaves and flowers can be boiled; juices can be extracted from the leaves; and poultices can be made out of the roots and barks. This may be simple and cheap but effective ways to treat common illnesses and prevent their serious consequences (de Guzman-Ladion, 1985).

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Scope and Delimitation

This descriptive study aimed at establishing the ethnobotanical profile of medicinal plants in a 75.1399 acres of Brgy. Guinobatan, Leganes, Iloilo. The study only covered 1/8 of this total area. It also aimed at determining the uses of these medicinal plants as well as the methods of preparation for medicinal purposes.

The independent variable that was considered in this study was the medicinal plants groupings according to their medicinal uses. The dependent variable was the ethnobotanical profile of medicinal plants in the study site.

The respondents, residents of Brgy. Guinobatan, were interviewed about the different medicinal plants that can be found in their area. The interview did not include the number of each species of medicinal plants found in the study site.

The descriptive statistical tool used in the study was the mode.

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Definition Of Terms

The following important terms were defined conceptually and operationally for further understanding:

Ethnobotanical study- is a study of plants' uses according to a group of cultural people (Webster's New Encyclopedic Dictionary, 1993).

In this study, the term would mean as is.

Medicinal- is tending or used to relieve or cure disease or pain (Webster's New Encyclopedic Dictionary).

In this study, the term would refer to plants that contain medicinal characteristics, that is, they contain chemicals that could cure certain diseases.

Prevalent- is generally or widely accepted practice or behavior (Webster's New Encyclopedic Dictionary, 1993).

In this study, the term would mean methods popularly used in preparing medicinal plants according to their uses.

Classification- is a systematic arrangement in groups or categories according to established criteria (Webster's New Encyclopedic Dictionary).

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In this study, the term would mean the grouping of medicinal plants according to their uses.

Preparation- is the action or process of getting something ready (Webster's New Encyclopedic Dictionary).

In this study, the term would mean the method of making medicines out of medicinal plants according to their use.

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Chapter 2

Review of Related Literature

History and Background

World War II, with its resultant scarcity of imported drugs, have shown us clearly the urgent need for extensive research on our medicinal plants. Never before had we been so forced to rely upon our own resources as we were then when the very life of our nation - for the people are the nation - depended upon utilizing the herbs God gave us. Certain of our plants commonly used as medicines are evidently valuable but have never been given fair trial or have been rejected as unsatisfactory. An intensive study of local Philippine plants by competent and well-trained investigators will surely yield most important results and lead to the discovery of quite new and valuable remedies (Quisumbing, 1978).

The Philippines presents a remarkably rich flora. Approximately 8,000 different species are known in the Archipelago, and continued exploration and study will doubtless increase the list to more than 10,000. About 60% of all these

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plants are confined to the Archipelago. It logically follows that an extensive survey will present a considerable number of species of distinct medicinal value (Quisumbing).

The time of harvesting medicinal plants is a considerable importance. Plants contain numerous chemical compounds known as the active principles which act synergistically or antagonistically in producing their reported medicinal effects. Knowing which plant part contains most of these active principles is not enough; the amount of these constituents vary, depending on the several factors such as temperature, humidity, light, and manner of handling during harvesting (de Padua, Lugod, and Pancho, 1982).

Renewed and accelerated interest on herbal medicine in the Philippines today is mainly due to unrelenting efforts of Filipino scientists in studying medicinal plants and disseminating information about them. Research findings in recent years have brought about changes in attitudes towards herbal medicine and in our health care delivery system. It is no longer uncommon to see herbal medicine being practiced side by side with modern medicine, even in the urban areas. The work of dedicated Filipino scientists continues, in an effort to assist

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in the socio-economic upliftment of the country through herbal medicine (de Padua and Pancho, 1989).

Different plant parts require different methods of collection. When the active principle is found in the seed, for example, the fruit is allowed to ripen fully before harvest, whereas if it is in the whole fruit, they may be collected even before reaching maturity. Most underground plant parts are collected just before the stage of flowering and it has been in order to attain the best medicinal effect (de Padua et al., 1982).

Prevention and control of disease is a global problem which is particularly severe in developing countries where there is still a desperate need for adequate health care and facilities. The use of medicinal plants is very valuable in answering this need. Many of these plants abound in our countryside where lack of medicines and medical attention is critically felt (de Padua and Pancho, 1989).

There is no secret in growing herbs. They thrive best in a sunny location where the soil is well drained and not too rich. Their requirements are simple. Many of the annual kinds are

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easily raised from seed, and the perennial kinds like sage, tarragon, and chives are obtainable from seedmen (Foley, 1944).

Not that long ago, medicine and botany were closely allied fields, because most remedies came from plants. Some pharmaceutical drugs in common use today are still of plant origin, but they are available only as highly refined chemical derivatives. The idea of using actual preparations of plants to treat sick people now seems hopelessly old-fashioned and unscientific to most physicians, and there is virtually no communication between the worlds of botany and medicine (Weil, 1993).

Many things that we use everyday are made from plants. The most obvious is food, the vegetables and fruit which we need to keep healthy. Other products such as paper also come from plants (World of Science, 1992).

Herbal is the manual facilitation of the identification of plants for medical purposes. Hundreds of medicinal plants were known in India before the Christian era, and the Chinese have the compilation, still authoritative of 1,892 ancient herbal remedies. The Greeks had written accounts, and, according to the elder Pliny, the physician Crateuas produced a herbal with

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colored illustrations. This has not survived but was probably largely embodied.

While the use of herbs is moving increasingly to the mainstream, it still falls to the consumer to find the most reliable information from the many books and periodicals available on the subject. Now that the United States is experiencing a "green wave" of interest in plant medicines, the Food and Drug Administration may finally be pressured to create a new form of over-the-counter regulation. Currently, the FDA classifies traditional plant drugs as foods or food additives. Therefore, their labels cannot list any medicinal uses or dosage information (Weil).

Herbal Plants In Folk Medicine

Plants have played an important role in traditional medicine from the earliest times. Medicinal plants and the *albularyo* (*herbolario*) are part of our cultural heritage. Plant products have been used in the treatment of diseases for many years and could be considered historically to be the first drugs.

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The goal of traditional medicine and modern medicine are the same - the improvement of man's health. Perhaps in the near future, plants will play an even greater role than their present highly significant one (de Padua et al., 1987).

As to the Philippines, various terms are used to designate our herb "doctors". The sellers of fresh or dried drugs are *herbolarios* and *herboristas* (herbmen, herbalists). These herbmen collect the plants in the forest or cultivate some of them on a limited scale in their yards. They are guided by tradition or are informed by some *curanderos* (quack "doctors") of long experiences as to the virtues of the drugs (Quisumbing, 1978).

In remote barrios and isolated towns, however, *curanderos* or sometimes called *mediquillos* are the only ones who tend the sick. In addition, we have the herb "doctors" who specialize in certain infections, like the "anti-mangkukulam", which is considered a sort of exorciser (Quisumbing).

The floundering, half-superstitious trials and errors of primitive and uneducated people have given us such important drugs as *Cinchona* for malaria, *Digitalis* and *Stophanthus* for heart disease, and *Quassia* as a bitter tonic (Quisumbing, 1978).

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In many cultures, healing has been associated with religion, and the curative properties of many plants have long been known to priests, shamans, and medicine men. Orthodox medicine in recent centuries has increasingly tended to dismiss the use of healing plants as "folk medicine" of little practical value, but traditional remedies have always had widespread popular use (Moore, 1991).

Alongside the genuine herbals, other works of a superstitious nature probably existed. Many were concerned of the fanciful medical theory of the doctrine of signitures, the use of plants to cure human ailments on the basis of supposed anatomical resemblance (Encyclopedia Britannica, 1978).

Drugs and medicine are substances which prevent or help to cure diseases. Many drugs come from plants, as ancient cultures knew well. For example, the leaves of the foxglove plant contain a substance called digitalin which is used in treating heart ailments. Many people knew and used this remedy for hundreds of years. Today, plants are grown under specifically controlled conditions to produce many drugs and healing substances (World of Science, 1992).

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Relation Of Herbs To Modern Medicine

Evidence of the significance being increasingly attached to medicinal plants is the successful introduction in the recent years of various drugs of natural origin, as well as the continuing effort of the pharmaceutical industry in search for natural sources of new drugs from different parts of the world. Some drug manufacturers are sending their own botanical explorers to distant lands, and research agencies are laboring to discover new material that would be of importance in the solution of many critical health problems (de Padua et al., 1987).

We have plants yielding products which can be used as substitute for imported ones. *Strophanthus leteti* has been studied locally and been found to contain strophanthin. Very likely other endemic species also contain such glucoside. Strychnine is obtained from *Strychnos nux-vomica*, which is an introduced species (Quisumbing, 1978).

Plants are particularly interesting sources of important substances since they provide chemicals with structures not likely to be synthesized in the laboratory. These plant products may be acting synergistically or antagonistically in producing

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the activity necessary in the treatment of diseases.

Histochemical tests were conducted on these plants and the findings are recorded in the test as: 1=detectable, 2=abundant, 3=very abundant, in the plant parts where the particular constituent was found present (de Padua et al., 1987).

Drying of medicinal plants, whether for storage or extraction, is also very important since moisture encourages the growth of molds and other microorganisms, leading to the destruction of the active principles and deterioration of the plant drug. Air-drying or sun-drying is usually employed in the absence of temperature-controlled ovens. Extremely high temperatures must be avoided as this could destroy some of the plant constituents (de Padua et al., 1982).

Storage and preservation of plant drugs have to be done in such a manner that no undesirable changes will occur. Moisture content, which should be less than 10%, infestation by insects and rodents and growth of microorganisms have to be taken into account. The dried plant drugs should be kept in plastic bags inside air-tight jars and placed in a cool, dry place away from light. With these precautions, most plant drugs will keep almost indefinitely (de Padua et al.).

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Histochemical studies on medicinal plants serve as a screening method for determining the active constituents of plants and their distribution within the plant body. These tests have the advantage of rapidity of results and the use of minimum amount of chemical reagents. They provide information for more extensive studies, such as studies on the extraction of active principles and the preparation of drugs from plants (de Padua et al., 1982).

Hand-sections of fresh specimens are used for histochemical tests. Procedures for the determination vary according to the constituents tested for and can be done in such a way that they have quantitative implications (de Padua et al.).

Dosage or how much to take is vitally important. For some plants, it has been found safe to boil a ten gram-leaf in about four cups of water. However, plants do not have the same potency. Therefore, until such time when the exact dosage is established by medical researchers, and the safe dosage delineated from the lethal dose for each plant, caution and moderation must always be observed in the use of these plants as medicine (de Padua et al.).

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Many medicinal plants can be grown anywhere, even under the most severe natural conditions. The best time for planting is during the rainy seasons; although planting could be done anytime of the year. Cultivation provides similar conditions where the plants were originally found (de Padua and Pancho, 1989).

Many uses of "yerba buena" as a herbal medicine would lead to questions regarding its genotoxicity. It would also be interesting to find out if "yerba buena" tablets produced by NSTA Pilot Plant possess antimutagenic properties (Lim-Sylianco, Blanco, and Lim, 1986).

Modern medicine relies on many plant products in the control of disease and the relief of pain. Among them is the bark of the chinchona tree, found in the Amazonian forest, which is the source of quinine, widely used to prevent malaria and to reduce fever (Moore, 1991).

Substances manufactured by certain plants to defend themselves against predators can be highly toxic to humans. In controlled doses, their physiological effects are beneficial in medicine.

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Many people both within the medical profession and outside it are coming to realize how little we have tapped the full potential of plants as a tool in overcoming diseases. The fear is that there may be many other plants with equally important life-saving characteristics that have already become extinct.

The problem is that most pharmaceutical drugs are too strong. Doctors have come to like drugs that produce very intense effects very rapidly. Certainly, there is a place for such products, particularly for the treatment of emergency conditions, where time is off the essence, but for the routine management of common illnesses, exclusive use of these strong drugs is technological overkill and clear violation of the famous precept of Hippocrates to physicians: *Primum non nocere* - First, do no harm (Weil, 1993).

To reach the status of an over-the-counter medicine, plants must go through a rigorous, and costly, testing process. Presently there is little incentive for either the government or pharmaceutical companies to foot the bill. One solution maybe for the FDA to create a "traditional medicine" category, modeled on an approach used in European countries. Such a system would provide consumers with traditional usage information, as well as

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recommended dosage. It would also provide information about scientific tests and results (Weil, 1993).

This study aimed at establishing the ethnobotanical profile of medicinal plants found in Brgy. Gulabutan, Leganes. This also aimed at classifying these medicinal plants according to their uses, and to determine the prevalent methods in preparing these medicinal plants according to the folks in the study area.

The researchers went to Brgy. Gulabutan, Leganes to have a better background of the study site. The total area of the study site, 5.8 sq. km, which is only 1% of the total area of 58,334 sq. km, was included in the research. The researchers contacted a person who lived near the study site and helped them in identifying some of the medicinal plants. They collected samples and just based on the information from the interviewed folks they also on some ethnobotanical profile of medicinal plants.

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Chapter 3

Research Design and Methodology

This study aimed at establishing the ethnobotanical profile of medicinal plants found in Brgy. Guinobatan, Leganes. This also aimed at classifying these medicinal plants according to their uses, and to determine the prevalent methods in preparing these medicinal plants according to the folks in the study area.

The researchers went to Brgy. Guinobatan, Leganes to have a better background of the study site. The total area of the study site, 3.8 sq. km. which is only 1/8 of the total area of 75.1399 acres, was included in the research. The researchers contacted a person who toured them around and helped them in identifying some of the medicinal plants. They collected samples not just based on the information from the interviewed folks but also on some knowledge about medicinal plants.

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Materials

The researchers used the following materials and reagents in accomplishing the study: field notebook, plastic bags, bolo, shovel, presser, plant cutters, pruning shears, masking tape, trowel, newspaper, folders (8.5" x 11"), rope, magnifying lens, wash bottles, marking pen, white glue, index cards (4" x 6"), 2 liters distilled water, 4 liters denatured alcohol, 500 ml formaldehyde, 15 g mercuric chloride, 12 ml carbolic acid or the phenol, and 500 ml glycerin.

These materials and reagents were used in collecting and preserving samples, respectively, of medicinal plants found in the study area.

Methods

Interview of Local Folks

The researchers interviewed some local folks in Brgy. Guinobatan, Leganes in order to identify what medicinal plants are found in the study area. The interview included the following questions:

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(a) What medicinal plants are available in Brgy. Guinobatan, Leganes?

(b) What are the physical characteristics of these medicinal plants in order to identify them?

(c) What specific ailment can be treated by these medicinal plant?

(d) How are these medicinal plants prepared?

Collection of Specimens

The researchers identified different medicinal plants in the study area. With the use of a bolo, the soil was cultivated so that the plant sample can be easily pulled, the roots still intact with the stem. The researchers got the plant from the soil using the shovel. The specimen was placed in a plastic bag. Each plastic bag was labeled with the corresponding common name of the specimen. The researchers gathered all the samples and brought these to the Philippine Science High School Biology laboratory.

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Collection of Data

Collection of data included the following information written in the field notebook and on the index cards to be attached for mounting: (a) scientific name, (b) common name, (c) study site where the specimen is taken, (d) date the specimen is collected, and (e) collection number.

Drying of the Specimens

After collecting the specimens from the study area and settling it in the Philippine Science High School Biology laboratory, the specimens were prepared for drying. First, the soil were removed from the roots of the plants. After which, the specimen were cleansed with distilled water. Then it was placed in the prepared solution for preserving the specimens. The specimens were then covered with two newspapers which was placed in between an 8.5" x 11" folder. After that, the samples were placed between the plant pressers. The presser together with the samples were tied with a rope for the specimens to be pressed accordingly. The samples were dried for at most one month.

Mounting of the Specimens

After drying the samples, the specimens were prepared for mounting. The samples were mounted on white folders with the use of white glue. The researchers see to it that the samples are securely mounted.

Labeling of the Specimens

After mounting the samples, each sample was labeled with its corresponding common name, scientific name, date of collection, study area, collection number, general characteristics and its taxonomic classification.

Statistical Data Analysis Procedure

In analyzing the results of the study, the statistical tool used was the mode.

Mode

In this study, the mode was used to determine the prevalent methods of preparations of medicinal plants according to the folks in the study site.

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Chapter 4

Results

This study aimed at establishing the ethnobotanical profile of medicinal plants found in Brgy. Guinobatan, Leganes. This also aimed at classifying these medicinal plants according to their uses, and to determine the prevalent methods in preparing these medicinal plants according to the folks in the study area.

Ethnobotanical Profile of the Medicinal Plants in Brgy.

Guinobatan, Leganes, Iloilo

There were 41 different medicinal plants in Brgy. Guinobatan, Leganes, Iloilo during the conduct of this study. These medicinal plants were the following: Adgaw (*Premna odorata* Blanco), Alibhon, Aloe Vera (*Aloe barbadensis* Mill), Anino, Anonang (*Cordia dichotoma* Forst.f.), Artamisa, Babana (*Anona muricata* Linn.), Malunggay (*Moringa oleifera* Lam.), Bangkiling (*Cicca acida* Linn. Merr.), Baston ni San Jose, Guava (*Psidium guajava* L.), Bunlau (*Justicia gendarussa* Burm.f.), Buri (*Corypha elata* Roxb.), Dila-Dila (*Onychium siliculosum* Desv. C. Chr.), Gauai-Gauai (*Sagittaria sagittaefolia* Linn.), Hagaskas, Herba

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Buena (*Mentha cordifolia* Opiz), Himbis-Himbis Puyo, Iba (*Hedychium coronarium*), Kalamayo, Kalauag (*Curcuma longa* Linn.), Kalooy (*Citrus hystrix* Dc.), Kaningag (*Cinnamomum mercadoi* Vidal), Kasla (*Croton tiglium* Linn.), Kulitis (*Amaranthus spinosus* Linn.), Labnog, Lagundi (*Vitex negundo* Linn.), Luku-Luko (*Ocimum sanctum* Linn.), Cassava (*Manihot esculenta* Crantz), Duhat (*Syzygium jambolanum*), Ginger (*Zingiber officinale* Roscoe), Mamali (*Pittosporum pentandrum* Blanco Merr.), Maritana, Montawe, Oregano (*Coleus aromaticus* Benth.), Lapunaya (*Coeus blumei* Benth.), Sudu-Sudu (*Euphorbia thymifolia* Linn.), Tagbak (*Kolowratia elegans* Presl.), Tanglad (*Andropogon citratus* DC Stapf), and Yahung-Yahung (*Centella asiatica* L.).

The data are presented in Table 1.

Medicinal Plants in Brgy. Guinobatan, Leganes, Iloilo Grouped as to Ailments

The medicinal plants found in the study site can cure 17 ailments. There were 11 plants for headache, 8 plants for cough, 8 for abdominal pains, 6 different plants can cure fever, 5 for diarrhea, 5 plants can cure wounds and "pasmó", 3 plants for witchcraft, 2 different plants for biri-biri, chest pains,

Plant	Head-ache	Cough	Burn	Bughal	Paano	Fever	Wound	Birt-Birti	Diarrhea	Chest Pains	Abdominal Pains	Rheuma	Bruise	Fracture	Diabetes	Witchcraft	Bujoc	Total
Artamisa	X	X				X												2
Adgaw		X																1
Alibhon			X															1
Aloe Vera				X														1
Anino	X																	2
Anunang	X				X													2
Babana	X																	1
Malunggay							X											1
Bangkiling						X												1
Baston ni San Jose	X							X										2
Guava							X											1
Bunlaw						X												1
Buri					X							X						1
Dila-Dila								X										2
Gaway-Gaway									X									1
Hagaskas					X						X							2
Herba Buena	X	X																2
Himblis-Himblis Puyo								X										1
Iba																		
Kalamayo							X											1
Kalawag	X						X						X					2
Kaloooy		X			X	X				X								2
Kaningag	X										X							4
Kasla						X								X				2
Kulitis															X			2
Labnog	X											X						1
Labnog																		2
Lagundi		X																1
Luku-Luko								X			X							2
Cassava									X		X							1
Duhat		X												X				3
Ginger											X					X		3
Mamali										X	X							1
Maritana										X	X		X					1
Montawe					X						X							2
Oregano		X				X												1
Pasaw	X										X				X			3
Lapunaya																	X	2
Sudu-Sudo		X					X											2
Tagbak																X		1
Tanglad	X								X									1
Yahung-Yahung																		1
Total	11	8	1	1	5	6	5	2	5	2	8	2	2	2	2	3	1	66

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arthritis, bruise, fractures, and diabetes, and 1 plant each for burn, "bughat", and "bukol".

The data are presented in Table 1.

Medicinal Plants Classification According to Preparation Methods

There were 9 ways of preparing these medicinal plants found in Brgy. Guinobatan, Leganes, Iloilo according to the folks interviewed.

There were 22 plants that can be used as poultice, 13 can be taken orally, 18 can be boiled, 3 need to be squeezed out before taking as medicine, 8 plants must be crushed, the fruit of 1 plant needs to be divided first before using it as a medicine, the skin of another plant have to be scraped off, 1 plant have to be heated, and a plant is rubbed on the skin.

The data are presented in Table 2.

the Method of Preparation.

Plant	Poultice	Taken Orally	Boiled	Divided	Scraped	Squeezed	Crushed	Heated	Rubbed	Total
Adgaw	X									1
Alibhon		X	X							2
Aloe Vera	X			X						2
Anino	X		X							2
Anunang	X				X					2
Artamisa		X				X				2
Babana	X						X			2
Malunggay						X				1
Bangkiling		X	X							2
Baston ni San Jose	X						X			2
Guava			X							1
Bunlaw	X									1
Buri	X		X							2
Dila-Dila			X							2
Gaway-Gaway	X	X						X		2
Hagaskas			X							1
Herba Buena			X							1
Himbis-Himbis		X	X							2
Puyo			X							2
Iba		X	X							2
Kalamayo	X									1
Kalawag	X						X		X	3
Kalooy		X					X			2
Kaningag	X									1
Kasla	X									1
Kulitis		X	X							2
Labnog	X									1
Lagundi			X							1
Luku-Luko	X									1
Cassava	X									2
Duhal		X	X							2
Ginger		X	X							2
Mamali	X									1
Maritana	X						X			2
Montawe			X							1
Oregano	X	X				X				2
Pasaw	X									1
Lapunaya	X		X			X				3
Sudu-Sudo	X					X				2
Tagbak		X	X				X			2
Tanglad	X									2
Yahung-Yahung		X	X							2
Total	22	13	18	1	1	3	8	1	1	68

Medicinal Plants Classification According to Medicinal Uses

There are different methods on preparing a plant for medicinal purposes.

There are 2 ways to prepare the following for medicinal uses: Alibhon, Aloe Vera, Anino, Anunang, Artamisa, Babana, Bangkiling, Baston ni San Jose, Buri, Dila-Dila, Gaway-Gaway, Himbis-Himbis Puyo, Iba, Kalooy, Kulitis, Duhat, Ginger, Maritana, Oregano, Sudu-Sudu, Tagbak, Tanglad, and Yahung-Yahung. Only 1 method is usually used by the folks in the study area to prepare the following as medicine: Adgaw, Malunggay, Guava, Bunlaw, Hagaskas, Herba Buena, Kalamayo, Kaningag, Kasla, Labnog, Lagundi, Luku-Luko, Cassava, Mamali, Montawe, and Pasaw. They also prepare Kalawag and Lapunaya in 3 different ways.

The data are presented in Table 2.

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Chapter 5

Summary, Findings, Conclusion, and Recommendations

Summary

The study aimed at establishing the ethnobotanical classification of medicinal plants in Brgy. Guinobatan, Leganes, Iloilo. It further determined the uses of these medicinal plants as well as the methods of preparation for medicinal purposes.

Specifically, it answered the following questions:

1. What is the ethnobotanical profile of the medicinal plants in Brgy. Guinobatan, Leganes?
2. What are the different human ailments that can be treated by these medicinal plants?
3. What are the prevalent methods of medicinal plant preparations of the folks in the study area?

Findings

The following are the findings obtained from the study:

1. There were 41 medicinal plants found in the study area. These are the Adgaw, Alibhon, Aloe Vera, Anino, Anunang, Artamisa, Babana, Malunggay, Bangkiling, Baston ni San Jose,

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Guava, Bunlaw, Buri, Dila-Dila, Gaway-Gaway, Hagaskas, Herba Buena, Himbis-Himbis Puyo, Iba, Kalamayo, Kalawag, Kalooy, Kaningag, Kasla, Kulitis, Labnog, Lagundi, Luku-Luko, Cassava, Duhat, Ginger, Mamali, Maritana, Montawe, Oregano, Pasaw, Lapunaya, Sudu-Sudo, Tagbak, Tanglad, and Yahung-Yahung.

2. The different ailments that can be treated by the medicinal plants found in the study area are the following: Headache, Cough, Burn, Bughat, Pasma, Fever, Wound, Biri-Biri, Diarrhea, Chest Pains, Abdominal Pains, Rheuma, Bruise, Fracture, Diabetes, Witchcraft, and Bukol. Headache has the most number of available medicinal plants while Kalooy is the plant with the most number of treated ailments.

3. The medicinal plants found in the study area can be prepared in 9 ways by the folks. The most prevalent of all methods was the preparation as poultice, followed by preparation by boiling, and, by taking orally.

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Conclusion

Based on the data gathered by this study, the following conclusions were established:

a.) There was a good number of medicinal plants in the study site. Forty one medicinal plants were found in the 3.6 sq. km. area of the site.

b.) One species of medicinal plant can be used for different ailments. At most four different ailments can be cured by each medicinal plant.

c.) Each medicinal plant can be prepared in different ways. The most prevalent method of preparing these medicinal plants is the preparation by poultice.

Recommendations

When similar studies are conducted, the researchers recommend to establish the actual number of each species of medicinal plants found in the study area. This would further present more specific data and results.

Also, the researchers recommend that similar studies be conducted in remote areas wherein the residents have no idea of the availability of medicinal plants in their area. This would

be of great help to the residents whenever they need homemade medicines for their ailments.

Lastly, the researchers recommend that the result of this study be provided to the residents of Brgy. Guinobatan, Leganes, Iloilo. In making the results of this study known to the residents, these medicinal plants would no longer be taken for granted or disregarded. Through this, people would benefit more from the important role that medicinal plants play in the society.

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