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**An Ethnobotanical Study of Medicinal Plants Used by Local People
in Yatsauk Township, Southern Shan State**



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Abstract

This study aimed to investigate and scientifically document the traditional medicinal plant species and their uses by local people in three villages of Nyaunggyo, Yephyu, and Monepyin in Yatsauk Township, Southern Shan State. We collected ethnobotanical information from 60 individuals, selecting 20 informants aged 40 to 60 from each village through face-to-face interviews. Plant specimens were collected from natural forests and the home compounds of informants. Additionally, we calculated the components of each plant species using the Fidelity Level (FL%) and Use Reports (URs), taking into account the same uses and various diseases. Therapeutic uses of medicinal plants were classified according to the ICPC-2 disease categories. Two hundred twenty-seven species belonging to 103 genera and 81 families were identified and documented as medicinal plants used by ethnic groups in Yatsauk Township. Of the 81 families documented, Fabaceae, Asteraceae, and Euphorbiaceae families were the most commonly cited families. Among parts of the plants, leaves were the most used. Decoction (40.81%) and food (29.38%) were primary. These medications were primarily used orally (85.30%) and topically (29.38%). According to ICPC-2 disease categories, 589 URs reported 71 therapeutic for 227 medicinal plants, and stomach-related diseases (106 URs) and general diseases (102 URs) were the most common diseases. According to the fidelity level (FL%), *Tadehagi triquetrum* (L.) for the treatment of cough (40%), *Zingiber barbatum* Wall. for treating pain and inflammation (40%), *Tinospora cordifolia* (Willd) for the treatment of diabetes (38.3%), *Chromolaena odorata* (L.) for treating various wounds (33.3%), and *Cissus discolor* Blume for the treatment of cancer and related diseases (33.3%) were documented as the five most commonly used species. Additionally, seven species of plants that were not included in previous studies on medicinal plant species used by the local people were also observed and identified. The results from this research will provide basic information for the development of natural medicines and other medicinal products, as well as information related to the plant species in the Flora of Myanmar Database.

Keywords: Myanmar, Shan people, medicinal plant, ethnobotany, quantitative

ရှမ်းပြည်နယ်(တောင်ပိုင်း)၊ ရပ်စောက်မြို့နယ်ရှိ ဒေသနေလူမျိုးတို့အသုံးပြုသည့် လူမှုရုက္ခဗေဒဆိုင်ရာ အချက်အလက်များအား စာရင်းကောက်ယူလေ့လာခြင်း

ဖြူဖြူနှင်း၊ လက်ထောက်သုတေသနအရာရှိ
သစ်တောသုတေသနဌာန၊ သစ်တောဦးစီးဌာန

စာတမ်းအကျဉ်း

ဤသုတေသနကို ရှမ်းပြည်နယ် တောင်ပိုင်း၊ ရပ်စောက်မြို့နယ်ရှိ ညောင်ကျို၊ ရေဖြူ၊ မုံပြင်စသည့် ကျေးရွာများတွင် ဌာနေတိုင်းရင်းသားများ အသုံးပြုသည့် တိုင်းရင်းဆေးဖက်ဝင် အပင်မျိုးစိတ်များနှင့် ၎င်းတို့၏ မိရိုးဖလာအသုံးပြုမှုများကို လေ့လာပြီး သိပ္ပံနည်းကျ မျိုးမည် ခွဲခြားဖော်ထုတ်မှတ်တမ်းတင်ရန် ရည်ရွယ်ချက်များဖြင့် ဆောင်ရွက်ခဲ့ခြင်းဖြစ်ပါသည်။ လူမှု ရုက္ခဗေဒဆိုင်ရာသတင်းအချက်အလက်များကို မျက်နှာချင်းဆိုင် တွေ့ဆုံမေးမြန်း ဆွေးနွေးမှု များဖြင့် ကျေးရွာတစ်ရွာစီမှ အသက် ၄၀ နှင့် ၆၀ ကြားရှိ ရွေးချယ်ထားသော သတင်းပေးသူ ၂၀ ဦးစီဖြင့် စုစုပေါင်း ၆၀ ဦးထံမှ ရယူစုဆောင်းခဲ့ပါသည်။ အပင်နမူနာများကို သဘာဝ တောများနှင့် အိမ်ခြံဝင်းများမှ စုဆောင်းခဲ့သည်။ ထို့အပြင် အပင်မျိုးစိတ်တစ်ခုစီ၏ အစိတ်အပိုင်းများကို တူညီသော အသုံးပြုမှုနှင့် မတူညီသော ရောဂါများပေါ်မူတည်၍ Fidelity Level (FL%) နှင့် Use Reports (URs) တို့ကို အသုံးပြု၍ တွက်ချက်ခဲ့ပါသည်။ ဆေးဖက်ဝင် အပင်များ၏ ကုထုံးအသုံးပြုမှုများကို ICPC-2 သတ်မှတ်ချက်များနှင့်အညီ အမျိုးအစားခွဲခြား ထားသည်။ ဆေးဖက်ဝင်အပင်မျိုးရင်း ၈၁ မျိုး၊ မျိုးစု ၁၀၃ မျိုးနှင့် စုစုပေါင်း အပင်မျိုးစိတ် ၂၂၇ မျိုးအား ရပ်စောက်မြို့နယ်ရှိ တိုင်းရင်းသားလူမျိုးစုများအသုံးပြုသော ဆေးဖက်ဝင် အပင်များအဖြစ် မျိုးခွဲမှတ်တမ်းတင်ခဲ့သည်။ မှတ်တမ်းပြုစုထားသော အပင်မျိုးရင်း ၈၁ မျိုးတွင် Fabaceae၊ Asteraceae နှင့် Euphorbiaceae မျိုးရင်းများသည် ဆေးဖက်ဝင်အသုံးပြုမှု အများဆုံး အပင်မျိုးရင်းများဖြစ်ပါသည်။ အပင်အစိတ်အပိုင်းများတွင် အရွက်များသည် အသုံးပြုမှု အများဆုံးဖြစ်ကြသည်။ အပင်အစိတ်အပိုင်းများကိုအသုံးပြု၍ ဆေးဝါးများ ပြင်ဆင်သုံးစွဲခြင်းများတွင် decoction (သဘာဝဖျော်ရည်)၌ (၄၀.၈၁%) နှင့် Food (အစားအစာ)၌ (၂၉.၃၈%) သည် အများဆုံး ဖြစ်ကြသည်။ ဤဆေးဝါးပြင်ဆင်မှုများကို သောက်ဆေး ၈၅.၃၀% နှင့် လိမ်းဆေး (၂၉.၃၈%) အဖြစ်အများဆုံး အသုံးပြုကြပါသည်။ ICPC-2 ရောဂါအမျိုးအစားများအရ 589 URs သည် ဆေးဖက်ဝင်အပင် ၂၂၇ ပင်အတွက် ကုထုံးပေါင်း ၇၁ခုကို ကုသမှုပြုကြပြီး အစာအိမ်နှင့် ပတ်သက်သည့်ရောဂါများ (106 URs)၊

အထွေထွေ ရောဂါများ (102 URs) သည် ကုသမှု အများဆုံးဖြစ်သော ရောဂါများဖြစ်သည်။ Fidelity level (FL%) အရ အသုံးပြုမှုများအား တွက်ချက်ရာတွင် *Tadehagi triquetrum* (L.) ကို ချောင်းဆိုးရောဂါ ကုသရာတွင် (၄၀%), *Zingiber barbatum* Wall. ကို အဆစ်အမြစ် နာကျင်ကိုက်ခဲခြင်း ကုသရာတွင် (၄၀%), *Tinospora cordifolia* (Willd) ကို ဆီးချိုရောဂါ ကုသရာတွင် (၃၈.၃%), *Chromolaena odorata* (L.) ကို ထိခိုက်ရှနာ ရောဂါများ ကုသရာတွင် (၃၃.၃%), *Cissus discolor* Blume ကို ကင်ဆာနှင့် အကျိတ်ရောဂါကုသခြင်း တွင် (၃၃.၃%) တို့ဖြင့် အသုံးပြုမှု အများဆုံး မျိုးစိတ်(၅) မျိုးအဖြစ် မှတ်တမ်းတင်ခဲ့ပါသည်။ ထို့ပြင် ရှမ်းလူမျိုးများ အသုံးပြုသော ဆေးဖက်ဝင်အပင် မျိုးစိတ်များနှင့် သက်ဆိုင်သည့် ယခင်သုတေသနပြု လေ့လာမှုများတွင်လည်း ထည့်သွင်းဖော်ပြခဲ့ခြင်း မရှိသေးသည့် အပင် မျိုးစိတ်(၇)မျိုးကိုလည်း လေ့လာတွေ့ရှိခဲ့ပါသည်။ ဤသုတေသနမှ ရလဒ်များသည် သဘာဝ ဆေးဝါးများနှင့် အခြားဆေးဖက်ဝင်ပစ္စည်းများ ဖွံ့ဖြိုးတိုးတက်မှုအတွက် အခြေခံ အချက်အလက်များသာမက Flora of Myanmar Database လုပ်ငန်းများ ဆောင်ရွက်မှု များတွင် အပင်မျိုးစိတ်များနှင့် သက်ဆိုင်သည့် အချက်အလက်များကိုလည်း ပံ့ပိုးပေးနိုင်မည် ဖြစ်ပါသည်။

An Ethnobotanical Study of Medicinal Plants Used by Local People in Yatsauk Township, Southern Shan State

1. Introduction

Plants provide people with food and medicines, materials for construction and manufacturing crafts and tools, and many other products such as fuel, paints, and poisons (Gerique, 2006). People from different cultures have always depended on plants for their primary needs and have naturally observed various usages of plants (Pandey and Tripathi, 2017). Therefore, studying ethnobotany is very important to understand the interactions of plants with the local people. It consists of the study of plant species and the uses of medicinal plants to treat diseases.

In developing countries, local peoples have used plants based on traditional medicinal plant knowledge for medicinal, and healthcare systems (Aase and Kadera, 2014; Giday et al., 2016; Kpodar et al., 2015). In Myanmar, there are differences in medicinal plants and uses according to the ethnic groups living in different areas.

Among the naturally growing plant species, local people use medicinal plants for their healthcare and to cure domestic animals. Documenting Myanmar's traditional medicinal knowledge is important not only for the discovery of potential plant species and the development of herbal medicines research but also for the cultural identity of people. Unfortunately, some medicinal plant species are facing a threatened situation due to being extracted from natural forests without any restraints. In the development of modern pharmaceutical industries, the use of traditional medicines and their roles have gradually decreased. Therefore, there is a need to document the use of traditional medicine among different local peoples in Myanmar.

2. Literature review

2.1. Traditional knowledge of medicinal plants

In Myanmar, traditional medicine rooted in the use of medicinal plants has served as the primary healthcare, dating back to at least the Tagaung, Srikittra, and Bagan eras around 600 BCE (Ministry of Health and Sports, 2013). The World Health Organization's (WHO) South-East Asia regional meeting revealed that over 85% of Myanmar's population depends on traditional medicine (WHO, 2009). This reliance on plant-based traditional medicine is particularly pronounced in rural areas where access to Western medical practices is limited. Consequently, Myanmar's Ministry of Health has initiated the Myanmar Traditional Medicinal Development Program to promote the preservation of scarce medicinal plants and the production of high-quality raw materials for traditional medicine, especially in rural locales (Ministry of Health and Sports, 2014). In support of this endeavor, the documentation of Myanmar's medicinal plants has been a crucial undertaking. To date, information about these plants has been cataloged in the publications, including lists and ethnobotanical studies conducted in different regions of Myanmar, these publications are published in English and are accessible to the public. One notable publication is "The Medicinal Plants of Myanmar," published in 2018 by DeFilipps and Krupnick, which includes a comprehensive compilation of 472 medicinal plant species and their uses. This publication stands out as a valuable resource for those interested in medicinal plants.

2.2. Myanmar's traditional medicinal system

Myanmar's healthcare system faces significant challenges, trailing behind in all aspects of the World Health Organization's (WHO) health system building blocks, and the country is categorized as a Grade 3 emergency by the WHO, signifying the highest level of concern. Several factors contribute to this situation, including weak governance structures, endemic institutional disparities, widespread poverty, ongoing conflicts, inadequate infrastructure, and seasonal natural disasters (Brennan, 2017). Myanmar falls among the 57 countries with a critical human resource shortage, with only 6.7 doctors and 10 nurses and midwives per 10,000 people in 2018, well below the WHO standard of 23 physicians, nurses, and midwives per 10,000 people (WHO, 2020). As a result of these disparities, official government health facilities are long time inaccessible to the majority of the population, especially in conflict-affected and hard-to-reach areas. For instance, Shan State, an ethnic minority region in the Northeastern part of Myanmar, has only 0.35 doctors and 1.53 health workforce per 1000 population (Saw et al., 2019). Treating major health problems such as malaria, injuries, and non-communicable diseases was challenging, and the local people tend to depend on traditional medicinal practices like local healers, unlicensed practitioners, and self-care methods for their primary healthcare needs. In Myanmar, there are (9) herbal gardens already have been established under the Department of Traditional Medicine. Now, these herbs are used again in the production of traditional medicines (Department of Traditional Medicine, 2019).

2.3. Brief introduction of Shan people

Shan ethnic group makes up half of the population of Shan State and represents about 9% of the Myanmar population (Central Intelligence Agency, 2022). The Shan is thought to have lived in the Southwestern part of China, where they were known as Dai, and to have migrated to the eastern part of Myanmar approximately 2000 years ago (Kyar, 1937).

In the past, the Shan people settled in the valley on both sides of the Salween River and established several tribes with varying sizes and political influences. They speak the Shan language, which shares the same roots as the Dai language in China and the Tai language in Thailand. The Shan people are predominately Buddhist, and their traditional medicinal system is based on the teachings of Buddhism. According to these teachings, a balance between actions, mind, weather, and food is necessary for food health and longevity (Aung, 2012; Aye and Win, 2019). Therefore, the Shan people believe that the surrounding natural environment, social and supernatural forces, and diet all have a crucial influence on a person's state of health. As a result, traditional Shan medicine takes on an integrative approach, combining physical and spiritual elements, food and medicine, herbal remedies, and ritualized curing systems to treat disorders with presumed natural or supernatural causes. This form of knowledge and practice is similar to Myanmar's current formal traditional medical system, which is regulated by the Myanmar Ministry of Health. The Shan people's knowledge of medicinal plants has been documented in other Shan States, and local health care heavily relies on traditional medicine (Aung, 2012; Aye and Win, 2019). In southern Shan State, research was conducted by (Shin et al., 2018 Shin et al. 2023; Mon et al. 2024), but in Southern Shan State, the situation in Yatsauk Township is still unknown.

3. Objectives

The main objectives of this study are as follows:

- a) to scientifically identify and record the plant species used by Indigenous people and
- b) to study and record the traditional uses of plant species by Indigenous people

4. Materials and Methods

4.1. Study area

Shan State covers 155,801 km², representing almost a quarter of the total area of Myanmar, and has a population of 5.8 million. The state borders China in the north, Laos in the east, and Thailand in the south. It lies on the hilly Shan plateau in eastern Myanmar, which has an average elevation of 1000 m. A total of 2187 plant species have been recorded from the Shan State, accounting for 19% of the total plant species found in Myanmar (Kress et al., 2003). Thirty-three ethnic groups are living in the Shan state, and the Shan tribe is the major ethnic group. The state is divided into four sectors that are northern, eastern, and southern Shan States. The study area is only carried out in Southern Shan State because other sectors have risks of security issues and travel restrictions. Southern Shan State is one of Myanmar's most dynamic ethno-agroecological zones. Therefore, we decided to conduct the ethnobotanical study in Yatsauk township. Therefore, Yatsauk Township was chosen as the site of the ethnobotanical study.

The population of Yatsauk Township is around 1.5 million (Department of Population, 2014), the main ethnic group is the Shan tribe, together with Burmese and a small number of Kachin, Kayah, Kayin, Chin, Mon, Rakhine, Danu, Palaung, Paoh, Inther, and Taung Yoe ethnic groups, etc. In Yatsauk Township, agriculture is the biggest source of income, especially from coffee, yellow maize, pigeon peas, garlic, mango, orange, and tea plantations. Sunflowers, Orchids, and Cashew nuts are planted seasonally in hilly areas. The public health facilities and the number of health servants are less equipped compared to the already low national average. On top of this, the relatively high cost of Western medicinal services and the poor road accessibility to health centers decreases the willingness of local people to use these clinics unless emergency operations are required. Local people predominantly depend on herbs and local healers, especially for the treatment of general and chronic illnesses.

4.2. Data collection on informants' interviews

An ethnobotanical field survey was conducted from December 2022 to January 2023 at three villages of Nyaunggyo, Yephyu, and Monepyin in Yatsauk Township (Figures 1,2,3,4 and Table 1), which were chosen to present the typical biological and cultural environment of Shan State. Data were collected from 60 individuals with 20 selected informants between the ages of 40 and 60 from each village through face-to-face interviews. (Table 2). Before the survey, the objectives of the study were explained, and permission was required from the village leader. As an official process, the surveys and interviews were then conducted with the assistance of officers from the staff of Yatsauk Township, Forest Department. The informants were identified, and face-to-face interviews were conducted with informed consent. The interviews followed the International Code of Ethics defined by the International Society of Ethnobiology in 2006 (ISE, 2006). Demographic information of the informants (age, gender, ethnic group, education level, and occupation) was recorded along with information on medicinal plants (vernacular name, use part, diseases, preparation and administration methods, source of knowledge). The interviews were conducted in either Burmese or Shan language with the assistance of a local translator and were later translated into English during the final data entry into Microsoft Excel 2010.

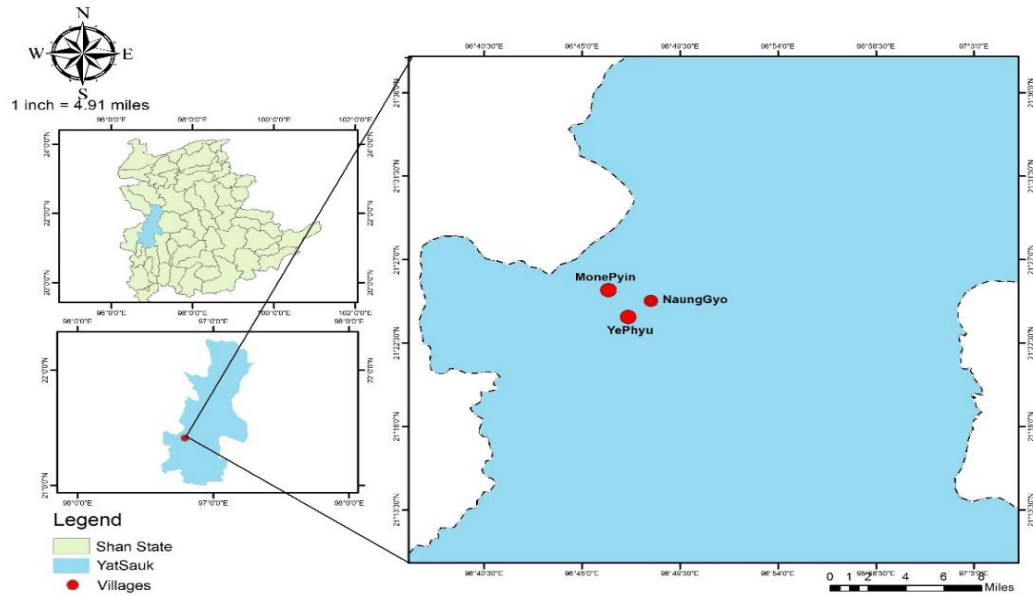


Figure 1. Map of the study area and sampling sites

Table 1. Information about the villages studied

Particulars	Nyaunggyo	Yephyu	Monepyin
Establishment	Late 19 th Century	1970	Early 19 th Century
Above Sea Level	3050	2587	2809
Forest type	Semi-evergreen Forest	Evergreen Forest	Evergreen Forest
Linear distance to the nearest town	20 miles to Yatsauk	11 miles to Yatsauk	17 miles to Yatsauk
Population/ Household	532/258	410/ 156	370/ 128
Ethnic Group	Majority: Danu Minority: Myamar, Paoh	Majority: Palaung Minority: Shan, Paoh	Majority: Paoh Minority: Shan, Palaung
Religion	Buddhism	Christian and Buddhism	Christian
Home Garden product (Monyin)	Ginger, Eggplant, Tomato, Chili, Chayote, Jack fruit, Mango, Jengkol	Pigeon pea, Tomato, pumpkin, Chili, Mango, Jack fruit	Mango, Dragon fruit, Pigeon pea, Ladyfinger, Eggplant, Cucumber
Main Subsistence (Pan Hnann)	Orange, Yellow maize, and Pigeon plantations	Coffee, Yellow maize, Pigeon pea, and Mango plantations	Tea leaves, Yellow maize, Pigeon pea, and Mango plantations
Live Stock	Buffalo, Cow, Chicken, Pig	Cow, Chicken, Pig	Cow, Chicken, Pig
Drinking water (Water supply)	Rain Water, Natural Spring	Well, and Dam water	Well, and Dam water
Electricity	Solar Electric	Electricity is supplied by the Government	Solar Electric and Small hydropower generators on the stream

Table 2. Demographic information of informants

Basic data of informants	Number of informants	Total informants (%)
Gender		
Male	30	50%
Female	30	50%
Age		
40-45	12	20%
45-50	19	31.67%
50-55	18	30%
55-60	11	18.33%
Education Level		
High	3	5%
Middle	7	11.67%
Basic	19	31.67%
Monastery education	18	30%
Non- education	13	21.66%
Occupation		
Famer	30	50%
Local healer	3	5%
Dependent	17	28.34%
Government Staff	2	3.33%
Shopkeeper	5	8.33%
Monk	3	5%

4.3. Specimen collection and identification

Field surveys were conducted from 2023 to 2025, with the participation of the villagers and government staff of the Forest Department at the Yatsauk Township. A total of 729 plant specimen sheets were collected during these surveys. The plant specimens were deposited at the RAF (Herbarium) and Biodiversity Research Center (BRC) in the Forest Research Institute.

These plant specimens were collected as part of the interviews to verify the medicinal plant species. Three replicates of each plant specimen were collected from nearby forests or, with their permission, from the informant's home compounds as shown in Figure 2,3,4.

Photos were taken of both fresh and dry specimens. The specimens were identified with the assistance of plant taxonomist Dr. Nobuyuki Tanaka from the National Museum of Nature and Science (NMNS), using “A Checklist of the Trees, Shrubs, Herbs, and Climbers of Myanmar” (Kress et al.,2003), Classification followed by the APG IV system (Chinese et.al.,2016), (Appendix). The accepted names were rectified using World Flora Online (<http://www.worldfloraonline.org>) and the origins of the plant species were noted according to Plants of the World Online (www.plantsoftheworldonline.org) (POWO,2020), and The Medicinal Plants of Myanmar.



Figure 2. Field survey activities in Nyaunggyo village



Figure 3. Field survey activities in Monepyin village

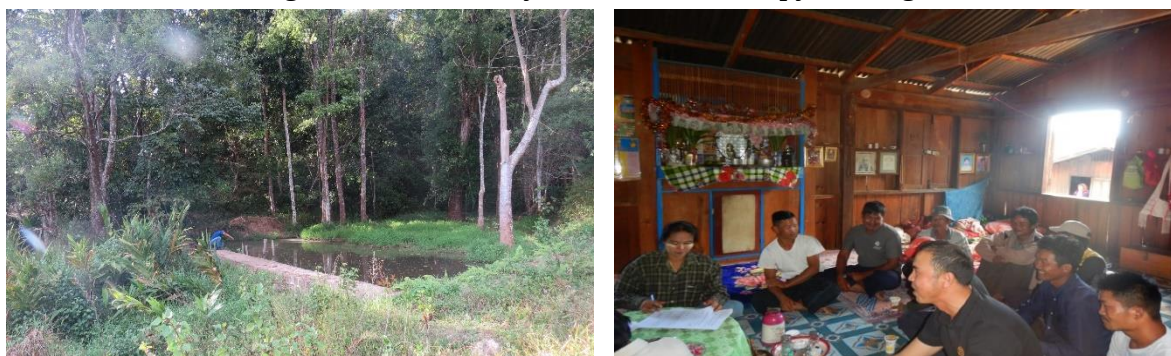


Figure 4. Field survey activities in Yephyu village

4.4. Disease category classification

The Therapeutic uses of medicinal plants were surveyed with field members and recorded in local terms, translated into English, and supplemented with their Shan names. They were finally converted into disease categories following the International Classification of Primary Care (ICPC-2, <http://www.who.int/classification/icd/adaptations/icpc2/en/>) to know the comparative knowledge with the previous ethnobotanical reports from Myanmar.

4.5. Quantitative ethnobotanical data analysis

The Use Reports (URs) were applied to evaluate the knowledge consensus of medicinal plants and prevalent diseases and to prioritize the most cited species by Shan people. Fidelity Level (FL) was applied to evaluate consensus on the specific therapeutic usage among different people of a given species.

4.5.1. Use Reports (URs)

The Use Reports (URs) are simple and direct descriptive statistics for the evaluation of the knowledge consensus of using species for various usages. It is counted when one informant mentions a species for a specific usage (Kufer et al., 2005). If one informant

mentions two usages of a given species, two URs are counted, and if two informants mention the same usage of the given species, two URs are counted. The most common diseases and frequently used herbs are categorized according to URs.

4.5.2. Fidelity Level (FL)

The Fidelity Level (FL) developed by Friedman et al. (1986), is the ratio between the number of informants who mentioned the use of a specific plant for a particular purpose and the total number of informants who mentioned the use of the same plant for any purpose. It measures the level of agreement among informants on using specific species for specific usage. A high FL value suggests that a large proportion of informants know the specific plant species for specific usage. Low FL indicates a small proportion of the informants know the specific plant species for the specific usage. However, FL will be inflated when few informants mention a few diseases for a given species, in extreme cases of one informant mentioning one disease to be treated by a given species the FL value is 100.

This will be problematic when one conducts an inter-species comparison. Otherwise, FL is useful for intra-species evaluation over the knowledge consensus. With consideration of this limitation, FL will evaluate the consensus of various diseases using the same given species, with a focus on the top five cited species applied. The FL% of the plant species obtained from the field survey was calculated using the following equation.

$$FL\% = \frac{I_p}{I_u} * 100$$

Where I_p = the number of informants who independently suggested the use of the specific plant for a particular purpose, and

I_u = the total number of informants who mentioned that plant for any use or purpose.

4.6 Comparative Literature Reports

The result of this study compared with the published national and international research papers, journals, and articles. Many research papers have identified new medicinal plant records and ethnomedicinal uses of plants currently being reported in Myanmar which are Ethnobotany Study on Medicinal Plants used by Mon People in Mon State by Kyaw, YMM, et al (2020), Medicinal and Wild Edible Plants used by Kayin Ethnic People in Myanmar by Shin, T et al.(2024), Vegetables from Local Markets in Myanmar by Yu, Zhaung, et al.(2022) and many other research papers from online sources.

5. Results and Discussion

5.1 Documented plant species and their uses

A total of **245 species** belonging to **205 genera** and **82 families** were collected with Myanmar vernacular names. Among these, eighteen species were woody and ornamental plants, and **227** were identified and documented as medicinal plants used by ethnic groups in Yatsauk Township. These medicinal species **belong to 103 genera and 81 families**. The most commonly cited families were Fabaceae (32 species, 14%), Asteraceae (10 species, 4%), Euphorbiaceae (9 species, 4%), Acanthaceae (8 species, 4%), Moraceae (8 species, 4%), Apocynaceae (7species, 3%), Combretaceae (7 species,3%), Lamiaceae (7 species, 3%), Anacardiaceae (6 species, 3%), Cucurbitaceae (5species,2%), Meliaceae (5species, 2%), Rubiaceae (5 species, 2%), Bigoniaceae(4 species, 2%), Phyllanthaceae (4 species, 2%), Rosaceae(4 species, 2%), Rutaceae (4 species, 2%), and Asparagaceae (3 species, 1%) (See

Figure 5). Information about these recorded medicinal plants was summarized in the Appendix in terms of scientific names, local names, family names, life forms, voucher specimens, part(s) used, preparation methods, administration methods, ICPC classification, and disease-by-use reports (URs).

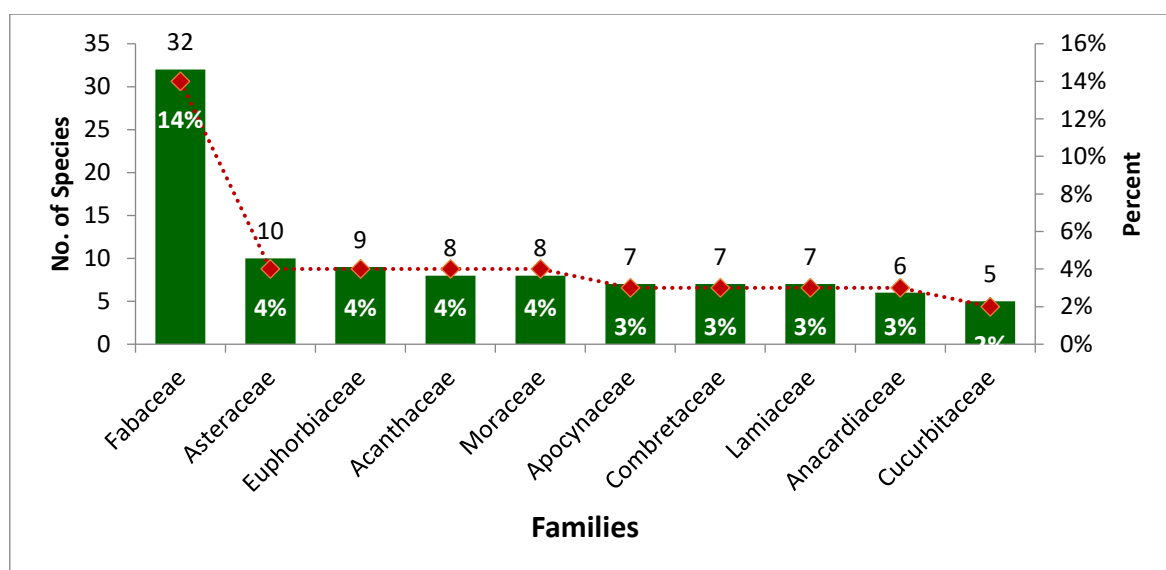


Figure 5. Most commonly families of medicinal plants

According to the survey result, life forms of the most documented species were trees (100 species, 44.05%), followed by herbs (50 species, 22.02%), shrubs (40 species, 17.62%), vines (20 species, 8.81%), small trees (15 species, 6.60%), creeper (2 species, 0.88%), and presented in Figure 6.

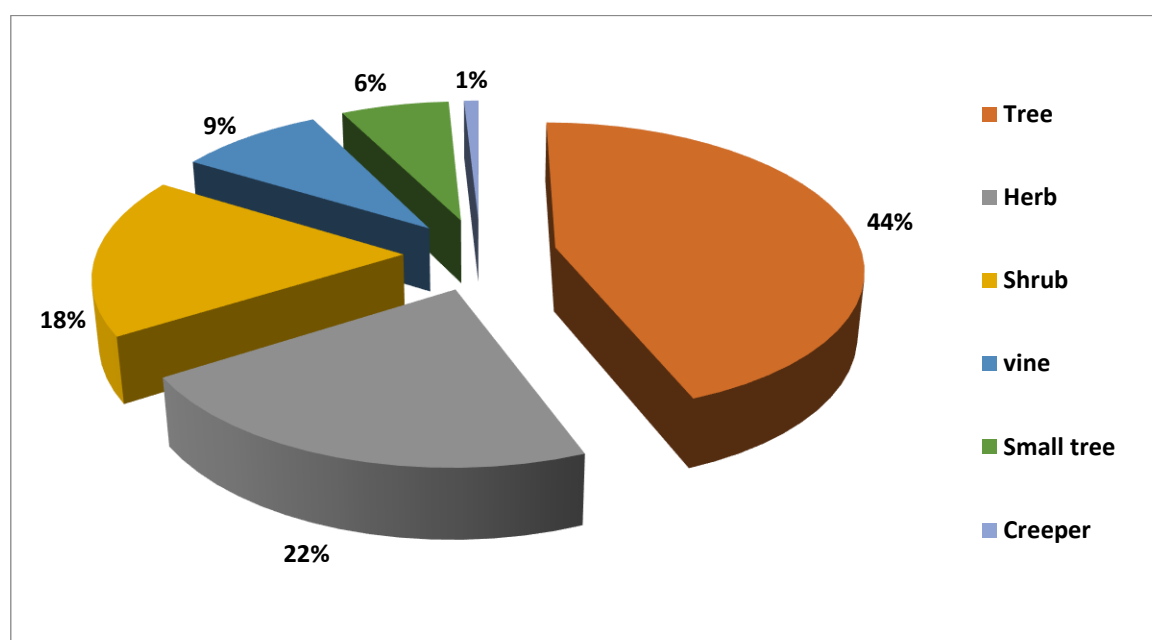


Figure 6. Life forms of most documented species

The parts of plants used for medicinal applications were leaves (102 species, 25.31%), followed by the fruit (58 species, 14.40%), bark (54 species, 13.40%), root (51 species, 12.7%), whole plant (46 species, 11.4%), wood (38 species, 9.4%), seed (20 species, 5.0%), flower (14

species, 3.5%), stem (12 species, 3.0%), oil (2 species, 0.5%), tuber (2 species, 0.5%), rhizome (2 species, 0.5%), resin (1 species, 0.2%), and cream (1 species, 0.2%), and shown in Figure 7.

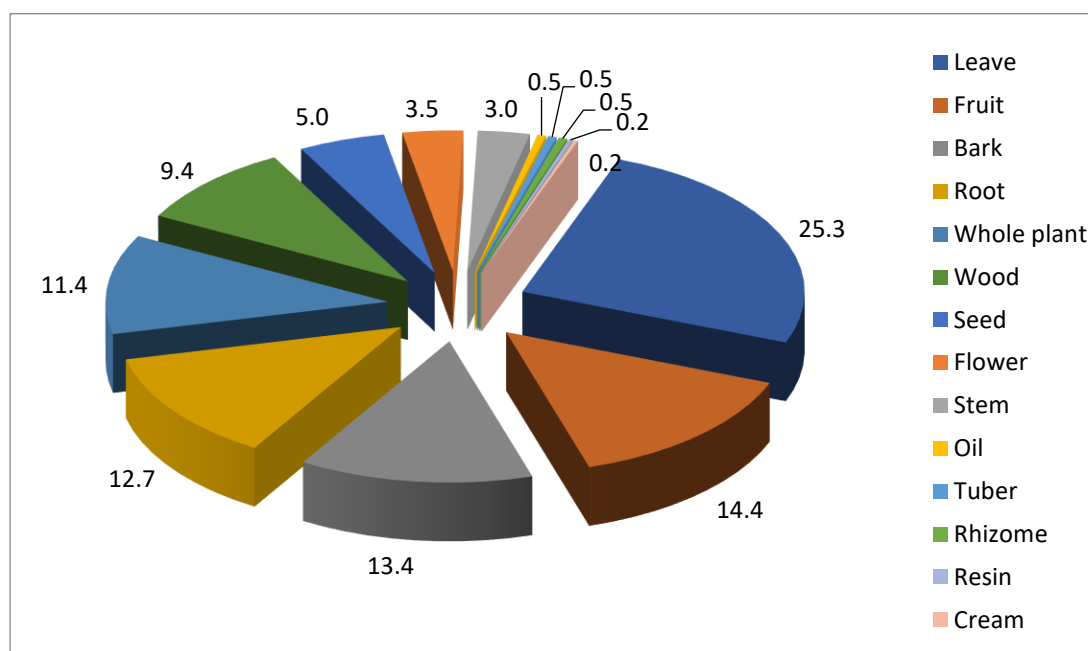


Figure 7. Parts of plants used for medicinal applications

In preparation of medicine, ten methods were documented: decoction (100 species, 40.81%), food (72 species, 29.38%), juice (54 species, 22.04%), powder (35 species, 14.29%), instant teas (20 species, 8.16%), raw (15 species, 6.12%), mixing with honey (8 species, 3.26%), roasting (5 species, 2.04%), syrup (4 species, 1.63%), rice water (4 species, 1.63%), as shown in Figure 8. Among these, it was noted that decoction is the most common method of preparing herbal medicine. The local informants of studied areas believed that by decocting the medicinal plant parts, their extract becomes more concentrated and obtains better taste and stronger efficacy. These ten preparation methods were used in seven different modes of administration oral 85.30% (209 species), followed by topical (29.38%), bathing (4.08%), eye drop (2.85%), nasal (2.04%), mouthwash (1.22%), and ear drop (0.81%) (Figure 9.). Other ethnobotanical studies conducted by Ojha SN et al., 2020; Sadat-Hosseini M, 2017; and Amiri MS, 2014 also stated that ethnic groups mostly prefer these two methods of preparation. Field survey and discussion with local peoples revealed some medicinal species such as *Chromolaena odorata* (Taw-bizat), *Tinospora cordifolia* (Sin-don-manwe), *Tadehagi triquetrum* (Lauk thay), *Zingiber montanum* (Meik- thalin) are utilized in both Oral and Topical administration modes.

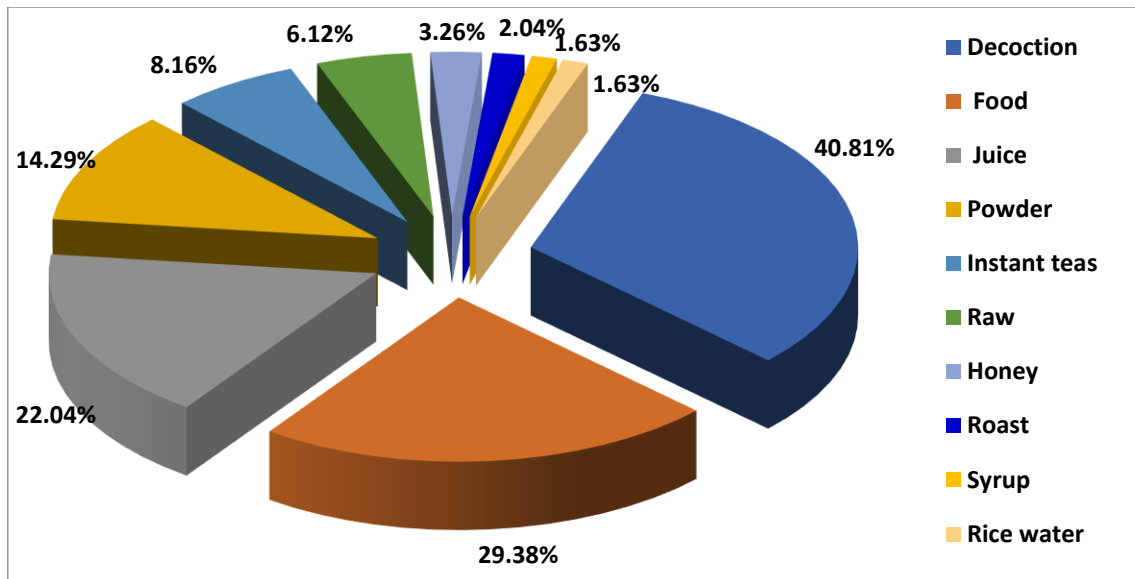


Figure 8. Preparation methods of medicine

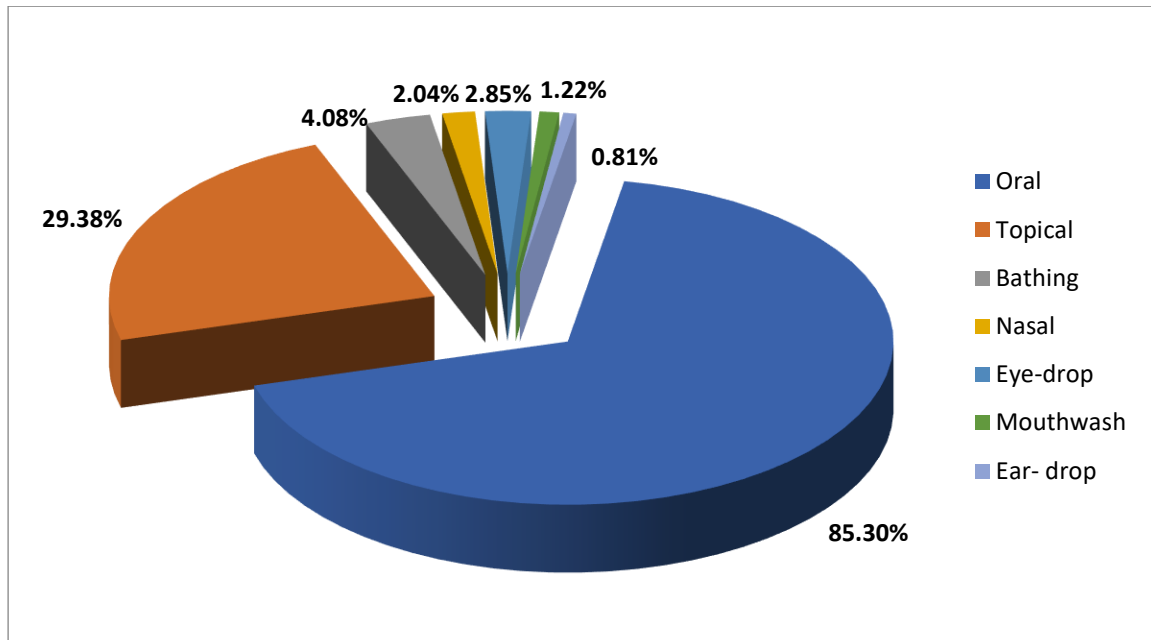


Figure 9. Mode of administration

5.2 Diseases treated by Local Traditional Medicinal plants and consensus of Knowledge

A total of 589 Use Reports (URs) were documented in this study, categorized into 71 therapeutic applications for 227 medicinal plant species, and classified into ICPC-2 disease categories as shown in Table 3. According to the ICPC-2 disease categories, Digestive (106 URs), and General and Unspecified (102 URs), were ranked as the most prevalent diseases, and our interviews provided much information on therapy for these diseases using medicinal plants (Table 3). Detailed information on the diseases treated by each species was described in the Appendix.

Table 3. Number of URs of each ICPC-2 disease category

ICPC -2 Disease Category	No. of URs
Digestive (D)	106
General and Unspecified (A)	102
Skin (S)	62
Respiratory (R)	57
Blood, Blood Forming Organs and Immune Mechanism (B)	55
Endocrine/ Metabolic and Nutritional (T)	54
Urological (U)	51
Musculoskeletal (L)	35
Female Genital (X)	17
Malaria	14
Eye (F)	12
Neurological (N)	10
Tuberculosis	7
Ear (H)	5
Cardiovascular	1
Pregnancy, Childbearing, Family Planning (W)	1
Total	589

5.3 Five most useful medicinal plants and their applications

The five species that were documented as the most cited based on URs were as follows: *Tinospora cordifolia* (Willd) Hook.f. & Thomson, leading with (87 URs), follow by *Chromolaena odorata* (L.) R.M. King & H. Rob. With 52 URs; *Tadehagi triquetrum* (L.) H. ohashi with 51 URs; *Zingiber barbatum* Wall. with 49 URs; and finally, *Cissus discolor* Blume with 48 URs; (Appendix).

Tinospora cordifolia (Menispermaceae) (Appendix, SN 167), “Sin-don-ma-nwe” in the Myanmar language, is a woody climber that is commonly found in Myanmar. It is also widely used in India (Banerjee et al., 2020) and China (Shi et al., 2017) for treating various diseases. In our study area, informants reported using the root and stem of the plant to diabetes, hypertension, tonic, dyspepsia, flatulence, longevity, paralysis, bone fracture, joint ache, malaria, abdominal pain, liver disease, gastritis, eye-disease, and cough. According to the quantitative evaluation, the highest FL value of 38.3% (Table 4) was found for diabetes, which has been scientifically tested and proven in recent years (Banerjee et al., 2020). The FAME Company in Myanmar has developed a product “Tinoflam” that uses *T. cordifolia* as the major component for treating anti-inflammatory. Concerns have been raised about the sustainability of this plant, as it is mainly sourced from wild habitats.

Out of 60 informants who mentioned this species, 14 stated that it is becoming increasingly difficult to find. Of these, 9 noted a decline in the population while 5 attributed this decline to the loss of habitat due to land use change from forest to another plantation. Moreover, *T. cordifolia* is one of 23 species out of 158 reported in this study that is sold in the market. As we have observed from the local market near Yatsauk Township, large amounts of *T. cordifolia* were extracted and sold in the market with a price of MMK 8000/ viss in dry weight. However, the information on the status of the resource and the trend of market demand are not available. Therefore, the sustainability of the current trade is unknown. Given its commercial value, however, there is a need for regular monitoring of its abundance and market demand.

Chromolaena odorata (Asteraceae) (Appendix, SN 40) is commonly known as an invasive weed. It is native to Central and South America and is now distributed throughout

Africa and tropical Asia (Muniappan & Marutani, 1991). Recently, however, Vijayaraghavan et al. (2017) reviewed this species' pharmacological activities and chemical constituents. They pointed out that the current focus on the species might have been distracted by its invasive notoriety but its wide spectrum of pharmacological activities has been neglected. The wound-healing property of *C. odorata* is widely acknowledged in Thailand, India, and Vietnam, and embedded into their traditional medical system (Vijayaraghavan et al., 2017), which is also supported by our study. In Myanmar, it is called “Bizat”, with a high consensus of using it for cuts and wounds FL value of 33.3% (Table 4) among the Shan people surveyed. Based on the survey, local people use the whole plant and leaf extract for a variety of purposes, including cuts and wounds, cough, hepatitis B virus, blood cough, cancer, fever, longevity, internal pain, liver disease, and herpes. However, based on local knowledge, caution should be paid when taking it, as an overdose can be poisonous. Further safety and efficacy evaluations of *C. odorata* should be encouraged in the future.

Tadehagi triquetrum (Fabaceae) (Appendix, SN 129) called “Lauk thay” in Myanmar, is abundantly distributed along roadsides and home compounds in Yatsauk Township. Myanmar people use the leaves to cover fish paste (ngapi in Burmese) to keep it free from fly larvae (Aye et al., 2019). In our survey, whole plants and leaves were used for cough, dysuria, tuberculosis, asthma, weight loss, hematemesis, hepatitis B virus, hepatitis C virus, renal disease, and urinary tract infection. The treatment of cough using this species had the highest consensus in our survey with an FL value of 40 % (Table 4). Some local people also prepare tea or infusions using leaves and whole plants for a wide range of therapeutic applications including cough, renal disease, tuberculosis, asthma, hematemesis, hepatitis B virus, weight loss, urinary tract infection, and dysuria. Recently, several ethnopharmacological studies of *T. triquetrum* have been conducted.

Zingiber montanum (Zingiberaceae) (Appendix, SN 245) also known as “Meik-thalin” in Myanmar, is abundantly distributed in home compounds and natural forests in Yatsauk Township. It is native to Southeast Asia, including Thailand, China, the Indian Subcontinent, and New Guinea. Most Myanmar people use the rhizome of the *Zingiber barbatum*, crushed with salt, to treat pain and inflammation. According to Indian medicine, due to its heat, *Zingiber barbatum* is good for cuts and wounds, cough, hepatitis B virus, blood cough, cancer, fever, longevity, internal pain, liver disease, and herpes. Its flowers are boiled and rubbed in Burmese homes and are also used in soups and stews, as well as eaten raw. In our survey, the rhizomes are used for joint pain, disorder, edema, inflammation in injury, hypertension, and back pain. The use of *Zingiber barbatum* for joint pain had the highest consensus in our survey, with an FL value of 40% (Table 4). Additionally, mixing the rhizome with *P. nigrum* powder and applying it to the whole body or parts of the body can help relieve colds and aches. Boiling the rhizome with water and drinking it can also help relieve diarrhea, abdominal pain, and flatulence.

Cissus discolor (Vitaceae) (Appendix, SN 243) called “Ta-bin-daing-mya-nan” in the Myanmar language, as a climbing vine, is a well-known medicinal plant commonly seen in Myanmar. It is also widely used as a medicinal plant in many countries, including India, Nepal, and China (Shi et al., 2017). In our study area, the informants reported that the rhizome and leaves are used to treat various cancers, malaria, fever, gout, skin diseases, wounds, cancerous tumors, and edema. Based on the quantitative evaluation, the highest FL value of 33.3% (Table 4) occurred for cancerous tumors. In Myanmar, the FAME Company has developed a product “Biocrush” using *C. discolor* as the major component for treating tumors, especially in the female reproductive tract. However, concerns have been raised about the sustainability of this plant as it is mainly sourced from wild habitats, as reported by some of our informants during interviews.

Table 4. Therapeutic usage and Fidelity Level (FL%) of top-cited medicinal plants used by Shan people

Plant form	Species name	Therapeutic usage	Informants		
			I _p	I _u	FL%
	Scientific Name <i>Tinospora cordifolia</i> (Willd) Hook.f.& Thomson Family Menispermaceae Myanmar Name Sindone manwe Local Name lat- kah-nwe	Diabetes	23	60	38.3
		Hypertension	15	60	25.0
		Tonic	11	60	18.3
		Dyspepsia	9	60	15.0
		Flatulence	8	60	13.3
		Longevity	7	60	11.6
		Paralysis	4	60	6.6
		Bone fracture	2	60	3.3
		Joint ache	2	60	3.3
		Malaria	1	60	1.6
		Abdominal pain	1	60	1.6
		Liver disease	1	60	1.6
		Gastritis	1	60	1.6
		Eye- disease	1	60	1.6
		Cough	1	60	1.6
	Scientific Name <i>Chromolaena odorata</i> (L.) R.M. King & H.Rob. Family Asteraceae Myanmar Name Bizat	Cut and Wounds	20	60	33.3
		Cough	15	60	25
		Hepatitis B virus	3	60	5
		Tuberculosis	2	60	3.3
		Blood cough	2	60	3.3
		Cancer	2	60	3.3
		Fever	1	60	1.6
		Longevity	1	60	1.6
		Internal pain	1	60	1.6
		Liver disease	1	60	1.6
		Herpes	1	60	1.6
	Scientific Name <i>Tadehagi triquetrum</i> (L.) H. ohashi Family Fabaceae Myanmar Name Lauk thay Local Name Nat say pin	Cough	24	60	40
		Renal disease	11	60	18.3
		Tuberculosis	7	60	11.6
		Asthma	3	60	5
		Hematemesis	1	60	1.6
		Hepatitis B virus	1	60	1.6
		Weight loss	1	60	1.6
		Urinary tract infection	1	60	1.6
		Dysuri	1	60	1.6
	Scientific Name <i>Zingiber montanum</i> (J.Koenig) Link ex A.Dietr. Family Zingiberaceae Myanmar Name Meik-tha-lin Local Name Meik-tha- lin	Joint pain	24	60	40
		Disorder	11	60	18.3
		Edema	4	60	6.7
		Inflammation in injury	4	60	6.7
		Hypertension	3	60	5
		Back pain	3	60	5

Plant form	Species name	Therapeutic usage	Informants		
			I _p	I _u	FL%
	Scientific Name	Cancerous tumor	20	60	33.3
	<i>Cissus discolor</i>	Various cancers	10	60	16.6
	Blume	Edema	8	60	13.3
	Family	Malaria	3	60	5
	Vitaceae	Skin diseases	2	60	3.3
	Myanmar Name	Wounds	2	60	3.3
	Ta-pin-daing-mya-nan	Fever	1	60	1.6
	Local Name	Gout	1	60	1.6
	Say-nwe-pin				

Note: I_p Number of informants who mentioned the use of particular ailments

I_u Total number of informants who mentioned the plant for any use

According to the study, it was noted that traditional uses of 7 medicinal species used by the Shan people were not included in the previously published medicinal plant lists (DeFilipps & Krupnick, 2018; Khaing & Moe, 2019; Khine et al, 2007; Lwin, 2015; Myint, 2017). Those plants were, (1) *Tradescantia zebrina* Bosse (Commelinaceae) (Appendix, SN 70), a herb commonly known as “Yewa”, is found in the home compound and the farmlands in Shan State. The Shan people are used as leaf decoction in diabetic, edema, intrahepatic, and gall stone. (2) *Quercus serrata* Thunb. (Fagaceae) (Appendix, SN 136), commonly known as “Nyan”, is found in Zawgyi Reserved Forest, Shan State. The bark is used as a decoction for toothache, stomach ailments, diarrhea, ulcers, and asthma, and the seeds are also consumed. (3) *Strychnos potatorum* L.f. (Loganiaceae) (Appendix, SN 151), a tree known as, “Khabaung-ye-kyi” in Myanmar, is reported by locals to use the fruit and seed decoction to treat flatulence, liver diseases, diabetes, diarrhea, dysentery, and renal disorders. (4) *Dalbergia sissoo* Roxb. ex DC. (Fabaceae) (Appendix, SN 113), a tree known as, “Kalar- padauk” in Myanmar, leaves, roots, and wood were reported to be used the treat sore throats, dysentery, inflammation, skin diseases, and gonorrhea. (5) *Broussonetia papyrifera* (L.) (Moraceae) (Appendix, SN 171), a small tree commonly known as “Thale”, has bark that is used to make paper pulp, and the leaves and bark are also used to make a decoction that acts as a diuretic and anti-inflammatory. (6) *Peperomia pellucida* (L.) Kunth (Piperaceae) (Appendix, SN 203), a herb known as “Kyauk- thin -pon” in Myanmar, is used in the whole plant decoction to treat intrahepatic stones and urinary tract infections. (7) *Boehmeria nivea* (L.) Gaudich. (Urticaceae) (Appendix, SN 241), a shrub known as “Kya-Sha” in Myanmar, is reported to use the leaves and roots in decoctions and powders to treat Inflammation, Diarrhea, and Stomach aches (Figure 9).



Tradescantia zebrina Bosse
Yewa
Commelinaceae



Quercus serrata Thunb.
Nyan
Fagaceae



Strychnos potatorum L.f.
Khabaung ye-kyi
Loganiaceae



Dalbergia sissoo Roxb.ex DC.
Kalar- padauk
Fabaceae



Broussonetia papyrifera (L.)
Thale
Moraceae



Peperomia pellucida (L.) Kunth
Kyauk- thin -pon
Piperaceae



Boehmeria nivea (L.) Gaudich.
Kya -Sha
Urticaceae

Figure 10. Lesser-known medicinal plants used by the Shan people

The names of these 7 medicinal plants were already known, but the knowledge of the plants that can be used medicinally according to each type of plant is poor. For example, the "Yewa" tree was known as an ornamental plant, and "Thale" was generally known to produce hemp. Moreover, "Nyan" and "Kalar-padauk" are used to make human equipment, "Kya-sha and Kyauk-thin-pon" are an unused natural plant, and "Kabaung-ye-kyi" is only fuel wood was also generally known. However, the Shan ethnic groups in the studied area are using these plants as medicinal plants. In addition, according to the ethnobotanical survey conducted by the Shan ethnic groups in the past, these plant species have not been recorded as medicinal plants. Therefore, it is suggested that it would be more appropriate if these seven species used by the Shan people according to the traditional method are included as a new addition to the list of medicinal plants used by the Shan ethnic groups.

5.4 Globally Threatened Medicinal Plant Species of Study Area

In classifying the IUCN (2) Red List, the study presents important findings regarding the conservation status of the 227 medicinal plants. It shows that most of the species, 112 were classified as Least Concern (LC). This means they are not currently facing significant threats. However, some species are more at risk. For example, 6 species: *Mitrephora* sp. (Annonaceae), *Shorea obtusa* Wall. Ex Blume (Dipterocarpaceae), *Dalbergia cultrata* T.S.Ralph (Fabaceae), *Dalbergia fusca* Pierre (Fabaceae), *Aegle marmelos* (L.) Correa (Rutaceae), and *Dipterocarpus obtusifolius* Teysm. Ex Miq. (Dipterocarpaceae) are Near Threatened (NT), and 5 species (*Curcuma longa* L. (Zingiberaceae), *Prunus domestica* L. (Rosaceae), *Averrhoa carambola* L. (Oxalidaceae), *Sesbania grandiflora* (L.) Poir. (Fabaceae), and *Carica papaya* L. (Caricaceae) are Data Deficient (DD). Three species including *Cedrela odorata* L (Meliaceae), *Santalum album* L. (Santalaceae), and *Archidendron pauciflorum* (Benth.) I.C.

Nielsen (Fabaceae) are Vulnerable (VU), and 1 species (*Coffea arabica* L.) (Rubiaceae) was Endangered (EN). This indicates that while many species are stable, some require attention and conservation efforts, as presented in the Appendix. The classification by the IUCN Red List highlights the need for ongoing monitoring of these species. It is crucial to protect the Vulnerable and endangered species to prevent further extinction.

6. Conclusion and Recommendation

According to the results findings, it can be concluded that a total of 227 medicinal plant species belonging to 103 genera and 81 families were documented. Fabaceae, Asteraceae, and Euphorbiaceae families were the most cited families, and *Z. barbatum*, *T. triquetrum*, *T. cordifolia*, *C. odorata*, and *C. discolor* were the most commonly used medicinal plants for the Shan peoples. Oral and topical medications were mainly used in the preparation of medicine, and leaves were the most used part of the plants.

Local peoples of the study areas in Yatsauk Township, Southern Shan State depend on natural forests for their livelihood and income. Various human activities such as (over-exploitation, expansion of farmlands, urbanization, etc.) lead to the destruction of forest ecosystems and risk the endangerment of plant species. Consequently, it is important to protect valuable medicinal species from extinction and to use them sustainably. Efforts should be made to ensure the use of traditional medicinal plants among herbal practitioners and to pass on the knowledge of medicinal plants to the younger generation to prevent the loss of herbal medicine. More ethnobotanical surveys related to the medicinal plants of individual regions or ethnic groups should be conducted to ensure the sustainability of traditional medicine and medicinal plants. By doing so, it will be able to study the natural growth, development, and effects of each plant in each region and systematically identify and record existing species, new species, and new records. Collecting local medicinal plants can provide not only basic information for the development of natural medicines and other medicinal products but also information about plant species in the Flora of Myanmar Database.

7. Acknowledgements

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8. References

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Appendix

An Ethnomedicinal Plants Used by the Local Peoples in Yatsauk Township, Southern Shan State

SN	Family	Scientific Name/ Conservation Status	Burmese Name and Local Name	Life Form	Plant parts used	Preparation method	Administration method	Medicinal uses with ICPC category	URs Disease
1	Acanthaceae	<i>Andrographis paniculata</i> (Burm.f.) Wall.ex Nees	Sega-gyi (B)	Herb	Wp	Decoction Cooking, Honey processing	Oral	Abdominal pain (B) Child fever(A) Cough (A) Dizziness(A) Hypertension(A) Malaria(A)	3 5 2 5 3 20
2	Acanthaceae	<i>Barleria noctiflora</i> L.f.	Leik - su - shwe (B) Pyo- manaing pan(L)	Shrub	Wp	Decoction juice, tea	Oral	Toothaches (A) Cough (R)	3 5
3	Acanthaceae	<i>Barleria prionitis</i> L.	Leik-sa-ywe (B)	Shrub	L	Decoction	Oral	Blood cough(R) Jaundice (D) Hemorrhoid (K) Edema (U)	6 2 2 1
4	Acanthaceae (LC)	<i>Hygrophila auriculata</i> (Schumach.) Heine	Le-padu or su-padang (B)	Herb	Wp	Decoction	Oral	Jaundice(D) Edema (U)	2 1
5	Acanthaceae (LC)	<i>Justicia adhatoda</i> L.	Muyar-gyi (B)	Shrub	L, R, Fr & B	Decoction	Oral, Bathing	Blood up coughing(R) Diabetic (T) Paralysis (N) Menstrual disorder(X)	2 3 2 2
6	Acanthaceae	<i>Rhinacanthus nasutus</i> (L.) Kurz	Htaw-Labat(B)	Shrub	L, S & R	Decoction, Oil	Topical	Hair growth (S)	11
7	Acanthaceae	<i>Ruellia tuberosa</i> L.	Byauk (B) Ngar- hmine(L)	Small tree	R & L	Decoction, Powder with Honey	Oral	Urological (U) Kidney disorder (B)	7 3
8	Acanthaceae	<i>Thunbergia laurifolia</i> Lindl.	kyi-kan-hnok-thi (B) Nwe pyar san (L)	Vine	L	Decoction, Juice	Oral, Eye- drop, ear - drop	Good for eye sight(F) Good for ear sight(H) Female genital(X)	2 2 3
9	Acoraceae (LC)	<i>Acorus calamus</i> L.	Lin-ne or Lin-lay (B)	Herb	R	Food, Juice	Oral, Topical	Fever(A) Gastritis(D) Bone fracture (L)	2 2 3
10	Amaranthaceae	<i>Achyranthes aspera</i> L.	Kyet-mauk-sue-pyan (B)	Herb	Wp	Decoction	Oral	Edema (U)	10
11	Amaranthaceae	<i>Chenopodium berlandieri</i> var. <i>boscianum</i> (Moq.) Wahl	Myu(B)	Herb	L	Food	Oral	Blood purifier (B) Diuretic(U) Sedative (P) Hepatoprotective(B)	5 3 2 3
12	Amaryllidaceae	<i>Crinum asiaticum</i> L.	Koyan-gyi(B)	Herb	L	Roast, Juice	Topical	Knee pain (R) Low back pain (R)	2 2
13	Anacardiaceae (LC)	<i>Anacardium occidentale</i> L.	Thiho-thayet (B)	Tree	Fr, B, S & L	Food, Juice	Oral	Diabetes (U) Heart disease (K) Stomach and Intestinal (D) Skin disease (S)	2 4 3 3 4
14	Anacardiaceae (LC)	<i>Buchanania lanzan</i> Spreng.	Lunbo(B)	Tree	S, O & L	Decoction	Topical	Good for eye (F) Skin disease (S) Boost the immune system (B)	1 1 1
15	Anacardiaceae	<i>Gluta usitata</i> (Wall.) Ding Hou	Thitsi (B)	Tree	L, W & Re	Lacquer for Furniture	-	varnish, waterproof or preservative paint, glue, ceramic and lacquerware	5
16	Anacardiaceae (LC)	<i>Lannea coromandelica</i> (Houtt.) Merr.	Nabe(B)	Tree	L, B, Fr & W	Food, Decoction	Oral	Heart disease ((K) Leprous ulcers (S) Toothache (A)	2 2 4
17	Anacardiaceae (LC)	<i>Rhus punjabensis</i> J.L.Stewart ex Brandis	Mai-kok kyin (L)	Small Tree	Fr	Food, Juice	Oral	Blood cough (R) Mouth cancer (B) Diarrhea (B)	5 4 2

SN	Family	Scientific Name/ Conservation Status	Burmese Name and Local Name	Life Form	Plant parts used	Preparation method	Administration method	Medicinal uses with ICPC category	URs Disease
18	Anacardiaceae (LC)	<i>Spondias pinnata</i> (L.f.) Kurz	Gwe or Pwe- baung (B)	Tree	Fr, W & B	Food	Oral	Dyspepsia (D) Dysentery (D) Earache(H)	2 2 1
19	Annonaceae (LC)	<i>Annona reticulata</i> Sieber ex A.DC.	Thinbaw- awza(B)	Tree	Fr, R & B	Food	Oral	Cardiac problems (A) Fever(A) Infestation(K)	2 1 1
20	Annonaceae (NT)	<i>Mitrephora</i> sp.	Unknown	Tree	-	Ornamental plant		IUCN Red List of Threatened Species.	
21	Apiaceae (36) (LC)	<i>Centella asiatica</i> (L.)	Myin-kwar (B)	Herb	L, Wp	Decoction, Food	Oral	Eye diseases (F) Poor eyesight (F) Tonic (T) Abdominal pain (D) Jaundice (D) Reduce body heat(A) Good for eye sight(F) Asthma (R) Menstrual disorder(X)	18 7 3 2 2 1 1 1 1
22	Apiaceae	<i>Eryngium foetidum</i> L.	Shan- nan-nan(B)	Herb	L	Food	Oral	Hypertension (K)	3
23	Apocynaceae (LC)	<i>Alstonia scholaris</i> (L.) R. Br	Taung- mayo(or) Taung- meoak(B)	Tree	B&R	Decoction Juice, Power with milk	Oral, Topical	Skin disease (S) Rheumatism (L) Leprosy (T) Diarrhea (B) Malaria (A)	3 2 2 5 4
24	Apocynaceae	<i>Cryptolepis buchananii</i> R.Br. ex Roem. & Schult.	Nasha-gyi (B)	Shrub	R	Decoction	Oral, Topical	Skin Burns (S) Fever (A) Diarrhea (B)	3 2 2
25	Apocynaceae (LC)	<i>Holarrhena pubescens</i> Wall. ex G. Don	Lettok-gyi(B)	Shrub	L, B & S	Decoction	Oral, Topical	Diarrhea (B) Skin disease (S)	3 2
26	Apocynaceae (LC)	<i>Plumeria alba</i> L.	Tayok- saga (or) akyaw(B)	Tree	B & Fl	Decoction, Food	Oral	Diarrhea (B) Fever (A) Cough (R)	4 4 6
27	Apocynaceae	<i>Leptadenia reticulata</i> (Retz.) Wight & Arn.	Goan-hka (or) Goan-cho (B)	Vine	R	Powder, Decoction	Oral, Topical	Cancer((B) Cough (R) Gout (T) Menstrual disorder(X)	1 2 1 1
28	Apocynaceae (EN)	<i>Rauvolfia serpentine</i> (L.) Benth.ex Kurz	Bonma-yaza(B)	Shrub	R	Decoction with warm water	Oral	Fever (A) Blood pressure (B) Insomnia (P)	1 2 3
29	Apocynaceae	<i>Stephanotis volubilis</i> (L.f.) S.Reuss, Liede & Meve	Gwedauk (B)	Vine	L&Fl	Food, Juice	Oral	Cough (R) Fever (A) Snakebites (A) Urinary discharge (U)	2 4 2 4
30	Araceae	<i>Lasia spinosa</i> (L.) Thwaites	Zayit (B)	Herb	L & St	Food, Decoction	Oral	Cough (R) Inflammatory disease (L) Antidote (A) Gastritis (D) Menstrual disorder(X)	3 1 2 1 2
31	Araliaceae (LC)	<i>Trevesia palmata</i> (Roxb. ex Lindl.) Vis.	Tagang or Hpaw (B)	Tree	L & Fr	Decoction, juice	Oral	Stomachache (D) Blood pressure (B)	2 2
32	Aristolochiaceae	<i>Aristolochia acuminata</i> Lam.	Eik thra muli (B)	Vine	L & R	Decoction, Juice	Oral, Topical	Antidote (A) Mouth ulcer(D)	2 1
33	Asparagaceae	<i>Asparagus racemosus</i> Willd.	Kanyut or Shint- matet(B)U- tayar(L)	Shrub	R	Decoction, Powder	Oral	Tonic(T)	2
34	Asparagaceae	<i>Dracaena angustifolia</i> (Medik.) Roxb.	Dandagu, or Dantalet (B)	Shrub	L	Food, Juice	Oral	Muscle pain(L) Rheumatism (T)	3 1
35	Asparagaceae	<i>Cordyline fruticosa</i> (L.) A.Chev.	Zawgyi taung whay (B)	Herb	L	Decoction	Oral	Blood cough (R) Hematemesis (D)	3 2
36	Asphodelaceae	<i>Aloe vera</i> (L.) Burm.f.	Sha-zaung-let-pat (B)	Herb	C	Food, Juice with Honey, and Syrum	Oral, Topical	Dysuria (U) Gallstone (U) Urinary tract infection (U)	5 3 3

SN	Family	Scientific Name/ Conservation Status	Burmese Name and Local Name	Life Form	Plant parts used	Preparation method	Administration method	Medicinal uses with ICPC category	URs Disease
								Menstrual decoder (X) Cough (R) Diabetic (T) Hemorrhoid (K) Heart disease (K) Burns (S)	1 3 2 1 1 1
37	Asteraceae	<i>Artemisia indica</i> Willd.	Me-te-toke(B) Nansei-shoto (L)	Small tree	Wp	Juice	Oral	Diarrhea (D) Abdominal pain(D)	2 1
38	Asteraceae (LC)	<i>Blumea balsamifera</i> (L.) DC.	Phon-ma-thein (B)	Small tree	L, R, Re	Decoction	Oral, Bathing	Paralysis (N) Menstrual disorder(X) Cough (R)	1 1 3
39	Asteraceae (52)	<i>Chromolaena odorata</i> (L.) R.M. King & H.Rob.	Taw-bizat (B)	Shrub	L & R	Juice, Decoction,	Oral, Topical	Cut and Wounds (S) Cough (R) Fever (A) Longevity (A) Tuberculosis(A) Hepatitis B virus (D) Blood cough (R) Hypertension (K) Internal pain (A) Cancer(B) Liver disease (D) Herpes(S)	20 15 1 1 2 3 2 3 1 2 1 1
40	Asteraceae (LC)	<i>Eclipta prostrata</i> (L.) L(LC)	Kyate-hman (B)	Herb	L	Juice, Decoction	Oral, Topical, Eye - drop	Scar (S) Blood circulation(A) Flatulence (D) Eye disease (F) Cough (R) Menstrual disorder(X)	20 3 4 5 7 1
41	Asteraceae	<i>Elephantopus scaber</i> L.	Kadu (B) Sin-che (L)	Herb	Wp	Decoction, Powder	Oral	Bladder stones (U) Skin disease (S) Fever (A) Diarrhea (D) Cough (R)	2 2 2 1 5
42	Asteraceae	<i>Eupatorium cannabinum</i> L.	Hkwe- thay-pan(B)	Herb	Wp	Juice	Oral	Ulcer (S)	3
43	Asteraceae	<i>Guizotia abyssinica</i> (L.f.) Cass	Pan hnan(B)	Herb	S	Decoction, Juice	Oral, Topical	Skin disease (S) Cough (R) Indigestion (D)	3 4 1
44	Asteraceae	<i>Crassocephalum crepidioides</i> (Benth.) S.Moore	Taw-bi-zat (B) Pann zaut htoe(L)	Herb	L & B	Decoction, lotion	Oral, Topical	Indigestion (D) Headache (A) Epilepsy (I)	1 1 1
45	Asteraceae	<i>Inula cappa</i> (Buch.- Han.ex D.Don)DC.	Pyar say pin(L)	Shrub	R	Juice, Decoction,	Oral, Bathing	Indigestion (D) Fever (A) Body aches (A)	2 2 1
46	Asteraceae	<i>Micractis bojeri</i> DC.	-	Herb	Wp	Decoction	Oral, Topical	Skin disease (S) Diabetes (T)	2 2
47	Bignoniaceae (LC)	<i>Oroxylum indicum</i> (L.) Kurz	Kyaung shar(B)	Tree	L, B, Fr & R	Decoction, Raw, Food, Powder, Juice	Oral	Flatulence (D) Hypertension (A) Mastitis (X) Earache (H) Renal disease (U) Ulcer (S) Gout(T)	2 2 1 10 3 4 5
48	Bignoniaceae (LC)	<i>Fernandoa adenophylla</i> (Wall.ex.G.Don)Ste nnis	Phat-than (B)	Tree	Fr&R	Decoction	Oral	Longevity (A)	2
49	Bignoniaceae (LC)	<i>Jacaranda acutifolia</i> Bonpl.	Sein pan pyar(B)	Tree	Fl, L, B & W	Decoction	Oral, Bathing	Leukemia (B) Neuralgia (A) Skin disease (S)	2 2 5
50	Bignoniaceae (LC)	<i>Millingtonia hortensis</i> L.f.	Egayit(B)	Tree	R	Decoction, Syrup, Rice water	Oral	Hypertension(K)	7
51	Boraginaceae (LC)	<i>Cordia myxa</i> L.	Taung-thanut or Thanat (B) Phet kyan(L)	Tree	Fr & L	Decoction	Oral	Urinary tract infections(U) Diarrhea disease (D)	2 2

SN	Family	Scientific Name/ Conservation Status	Burmese Name and Local Name	Life Form	Plant parts used	Preparation method	Administration method	Medicinal uses with ICPC category	URs Disease
								Tuberculosis (R) Liver and spleen disorders (B) Fever (A) Malaria (A)	1 2 3 4
52	Boraginaceae	<i>Heliotropium indicum</i> L.	Sin-hna- maung (B)	Herb	Wp	Decoction, Instant	Oral, Topical	Hepatitis B virus (D) Jaundice(D) Renal disease (U) Gall stone(U) Internal pain (A) Diabetic (T) Urinary tract infections(U)	4 1 2 2 1 1 2
53	Brassicaceae	<i>Rorippa indica</i> (L.) Hiern	Taw -mone -nyin (B)	Herb	L & B	Raw, Cooking, Food	Oral	Cough (R) Diarrhea, (D) rheumatoid ((T)	2 2 1
54	Bromeliaceae	<i>Ananas comosus</i> (L.)Merr.	Na-nut (B)	Herb	R & Fr	Decoction, Raw	Oral	Edema (U) Gall stone (U)	2 4
55	Burseraceae (LC)	<i>Garuga pinnata</i> Roxb.	Chinyok (B) Cha- pyan(L)	Tree	B, L & Fr	Juice		Asthma(R) Stomachic (D) Antidiabetic (U)	2 2 1
56	Burseraceae	<i>Protium serratum</i> (Wall.ex Colebr.) Engl.	Thadi(B)Kadi (L)	Small tree	Fr & W	Decoction	Oral	Stomach ulcer (D)	2
57	Capparaceae (LC)	<i>Crateva magna</i> (Lour.) DC.	Kadat (B)	Tree	Wp	Decoction, Powder, Juice, Food	Oral, Topical	Fever (A) Paralysis(N) Gout((T) Internal organ cancer(B)	3 2 3 5
58	Caricaceae (DD)	<i>Carica papaya</i> L.	Thin-baw (B)	Tree	L & Fr	Food, Instant, Decoction,	Oral	Cancer(B) Ulcer (S) Diabetic (T)	4 1 1
59	Clusiaceae	<i>Garcinia pedunculata</i> Roxb.ex Buch.-Ham	Metlin-chin (B)	Tree	Fr, R& L	Decoction, Instant, Food,	Oral, Bathing	Jaundice(D) Dysuria (U) Hepatitis(B) Virus(D)	3 2 2 2
60	Clusiaceae (LC)	<i>Garcinia xanthochymus</i> Hook. f.ex.T. Anderson	Hmandaw (B) Daungyan(L)	Tree	Fr	Decoction	Oral	Diarrhea (D) Vomiting (A)	2 2
61	Combretaceae	<i>Terminalia pendula</i> var. <i>pendula</i>	Yon(B)	Tree	W, B & L	Decoction	Oral	Cough (R) Headaches (A) Menstrual pain (X) rheumatoid (T) Tuberculosis(R) Skin diseases(S)	3 2 2 3 2 1
62	Combretaceae	<i>Combretum indicum</i> (L.)DeFilipps	Dawe-hmaing(B)	Vine	Fr, R & S	Decoction, Juice	Oral	Piles (T) Ulcers(S) Skin infection (S) Fever(A)	2 1 3 2
63	Combretaceae	<i>Getonia floribunda</i> Roxb.	Gyut-nwe or Kywet – nwe (B)	Vine	L & Fr	Decoction	Oral, Topical	Diarrhea (D) Jaundice (T) Malaria (A) Ulcers (S) Snakebite (A)	2 1 1 1 3
64	Combretaceae (LC)	<i>Terminalia bellirica</i> (Gaertn.)Roxb.	Thit-seint (B)	Tree	Fr, S & w	Food,	Oral	Liver disease (B) Respiratory conditions (R) Cough(R)	2 3 5
65	Combretaceae	<i>Terminalia calamansanai</i> (Blan co) Rolfe	Lein(B)	Tree	W& B	Decoction	Oral	Gonorrhea (U)	1
66	Combretaceae (LC)	<i>Terminalia citrina</i> (Gaertn.) Roxb.	Kya-su (B)Phan- kha - nge(L)	Tree	Fr	Juice, Food, Powder, Instant, Decoction	Oral, Eye- drop Topical	Eye disease (F) Dyspepsia (D) Menstrual disorder(X)	1 1 1
67	Combretaceae	<i>Terminalia tomentosa</i> var. <i>coriacea</i> (Roxb.) C.B. Clarke	Taukkyan (B)	Tree	B & W	Instant, Powder	Oral, Topical	Ulcers (S) Hemorrhages (X) Bronchitis (A) Diarrhea (D)	2 2 1 2

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68	Commelinaceae	<i>Tradescantia spathacea</i> Sw.	Mee quin gamone (B)	Herb	Wp	Decoction, Instant	Oral, Nasal	Hemorrhoid (K) Dysentery (D) Leukemia (B) Hypertension (K) Blood cough (R) Diabetic(T) Cough (R)	7 1 1 2 1 4 2
69	Commelinaceae	<i>Tradescantia zebrina</i> Bosse	Yewa (B)	Herb	L	Decoction	Oral	Diabetic (T) Edema (U) Intrahepatic stone(U) Gall stone (U)	2 1 1 1
70	Convolvulaceae	<i>Cuscuta chinensis</i> Lam.	Shwe- nwe (B)	Herb	St	Powder, Decoction	Oral, Topical	Kidney diseases (B) Liver diseases(B) Skin diseases (S)	2 2 1
71	Convolvulaceae (LC)	<i>Ipomoea cordatotriloba</i> Dennst.	Ka zun nwe (B)	Crepper	L	Powder, Food	Oral, Topical	Antidote (A)	2
72	Cucurbitaceae	<i>Benincasa hispida</i> (Thunb.) Cogn.	Kyauk- hpayon. (B)	Vine	Wp	Food, Decoction	Oral	Dysuria (U) Urinary tract infection(U)	1 1
73	Cucurbitaceae	<i>Coccinia grandis</i> (L.) Voigt	Kin pone (B)	Vine	Fr	Juice	Oral	Antidote (A) Skin treatment (S) Muscle pain (L)	1 1 1
74	Cucurbitaceae	<i>Luffa aegyptiaca</i> Mill.	Thabut-kha(B)Tha but chaw(L)	Vine	L & Fr	Decoction	Oral, Nasal	Fever(A) Nasal congestion (R)	1 1
75	Cucurbitaceae	<i>Momordica charantia</i> L.	Kyet-hinga (B)	Vine	Fr & L	Food, Decoction	Oral	Hypertension(K) Diabetic (T) Cancer(B)	3 3 1
76	Cucurbitaceae	<i>Trichosanthes tricuspidata</i> Lour.	Kyi-ah (B)	Vine	Wp	Juice	Oral, Topical	Antidote(A)	1
77	Dilleniaceae	<i>Dillenia pentagyna</i> Roxb.	Zin - byun(B)	Tree	Fr &W	Food, Decoction	Oral	Fever (A) Diabetes (U) Diarrhea (D) Antidote(A)	1 1 1 1
78	Dilleniaceae	<i>Dillenia parviflora</i> Griff.	Lin - yaw(B)	Tree	Fr, W &B	Decoction	Oral	Cancers (B) Fever (A) Cough (R) Diabetes (U) Diarrhea (D)	1 1 2 1 1
79	Dioscoreaceae	<i>Dioscorea decipiens</i> Hook.f.	Thindauk (B)	Vine	Tu	Food	Oral	Cough (R) Stomach ache (D) Leprosy (I) Burns (A)	1 1 1 1
80	Dioscoreaceae (LC)	<i>Dioscorea wallichii</i> Hook.f.	Kadat(B)	Vine	L & B	Decoction, Food, Powder, Juice	Oral	Internal organ cancer(B) Fever (A) Paralysis (N) Gout(T)	3 1 1 1
81	Dioscoreaceae	<i>Tacca chantrieri</i> Sndre	Zaw- gyi- moke- seik- Gamone(B)	Herb	Wp	Decoction, Roast, Juice	Oral, Topical	Cancer(B)	1
82	Dipterocarpaceae (LC) Decreasing	<i>Shorea siamensis</i> Miq.	Ingyin(B)	Tree	L, B & W	Decoction	Oral	Dysentery (D)	1
83	Dipterocarpaceae (NT) Decreasing	<i>Dipterocarpus obtusifolius</i> Teysm. Ex Miq.	Inbo(B) Kanyin kote(L)	Tree	L & W	Decoction	Topical	Inflammatory pains (A)	1
84	Dipterocarpaceae (NT) Decreasing	<i>Shorea obtusa</i> Wall. Ex Blume	Thitya(B)	Tree	W &B	Decoction	Oral, Topical	Malaria (A) Ulcers (S)	1 1
85	Ebenaceae (LC)	<i>Diospyros Kaki</i> L.f.	Taw-tae(B)	Tree	L &Fr	Decoction	Oral	Cerebral arteriosclerosis(B) Diabetes(U) Hypertension(K)	1 1 1
86	Elaeagnaceae	<i>Elaeagnus triflora</i> Roxb.	Hmangu(B) Mai- lwai (L)	Shrub,	Fr	Food, Decoction, Raw	Oral	Dysentery (D) Cardiac disease (K)	1 1
87	Elaeocarpaceae	<i>Elaeocarpus wallichii</i> Kurz	Waso(B)	Tree	W& Fr	Food	Oral	Ulcers (S)	1
88	Equisetaceae (LC) Increasing	<i>Equisetum hyemale</i> L.	Boktaung or Wetkyein (B)	Herb	Wp	Decoction	Oral	Diabetic (T) Edema (U) Intrahepatic stone (U)	2 2 1

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								Gall stone (U)	1
89	Euphorbiaceae	<i>Acalypha indica</i> L.	kyaung-yo-thay pin (B)	Herb	L, Wp	Powder, Decoction, Instant, Juice, Honey	Oral, Ear	Asthma(R) Cough (R) Tuberculosis (A) Earache (H) Blood cough (R)	2 2 1 2 1
90	Euphorbiaceae	<i>Croton persimilis</i> Müll.Arg.	Thetyin-gyi (B)	Tree	B, L, S & R	Decoction, Instant, Juice, Rice water	Oral, Topical	Paralysis (N) Joint ache (L) Edema (U) Abdominal pain (D) Obesity (T) Menstrual disorder (X)	3 2 1 2 1 1 1
91	Euphorbiaceae	<i>Chrozophora plicata</i> (Vahl.)A.Jus s.ex Spreng.	Gyo-sagauk (B)	Herb	Wp	Food, Decoction, Juice	Oral	Mouth ulcers (A) Skin diseases (S) Fever (A) Joint pain (L) Jaundice (A) Menstrual problems (X)	2 1 1 1 1 1
92	Euphorbiaceae	<i>Jatropha multifida</i> L.	Semakhan (B)	Shrub	L	Decoction	Oral	Haematemesis(D)	6
93	Euphorbiaceae	<i>Jatropha podagrica</i> Hook.	Ta-bin-shwe-hti (B)	Herb	Tu	Decoction, Instant	Oral	Antidote (A) Diarrhea (D)	1 1
94	Euphorbiaceae (LC) Stable	<i>Mallotus philippensis</i> var. <i>reticulatus</i> (Dunn) F.P. Metcalf	Po-thi-din (B)	Tree	S & Fr	Food, Decoction, Eye- drop	Oral	Skin diseases (S) Bronchitis (A) Eye-disease (F) Cancer (B) Diabetes (U) Diarrhea (D) Jaundice (A) Malaria (A) Urinogenital (U)	1 1 1 1 1 1 1 1
95	Euphorbiaceae	<i>Plukenetia volubilis</i> L.	Kyel-pae (B)	Vine	S	Food, Roast	Oral	Eye- diseases (F) Heart disease (K) Diabetic (T)	1 1 1
96	Euphorbiaceae	<i>Ricinus communis</i> L.	Kyet-hsu- yoni(B)	Shrub	L, R, S & O	Pounding, Roast	Oral, Topical	Injury (A) Sprain (L)	1 1
97	Euphorbiaceae (LC) Stable	<i>Mallotus nudiflorus</i> (L.) Kulju & Welzen	Setkadon (B)	Tree	W	Decoction	Oral	Flatulence (U) Ulcers (A)	1 1
98	Fabaceae	<i>Abrus precatorius</i> L.	Ywenge (B)	Shrub	L, R & S	Decoction	Oral, Topical	Skin diseases(S) Stomatitis (A) Laxatives(D)	1 1 1
99	Fabaceae (LC)	<i>Albizia chinensis</i> (Osbeck)Merr.	Bonmeza (B)	Tree	W, Fl& St	Decoction	Oral, Topical	Cancer(B) Sore throat (A) Ulcers (A) Antidote (A)	1 1 1 1
100	Fabaceae (LC)	<i>Albizia lucidior</i> (Steud) I. C. Nielson ex H. Hara	Than -thet(B)	Tree	W	Fuel, Furniture	-	-	-
101	Fabaceae (LC) Stable	<i>Albizia procera</i> (Roxb.) Benth.	Sit(B)	Tree	L, B &W	Decoction	Oral	Rheumatism (T) Hemorrhage (X) Pregnancy (X) Stomach-ache(D)	2 1 2 1
102	Fabaceae	<i>Alysicarpus ovalifolius</i> (Schumach.) J. Leonard	Than-manaing- kyauk-manaing (B) kyauk kaw(L)	Herb	Wp	Decoction, Instant, Bathing	Oral, Bathing	Gallstone (U) Dysuria (U) Jaundice (D) Urinary tract infection(U) Renal disease (U) Asthma (R) Cough (R)	11 10 10 5 5 1 1
103	Fabaceae (VU) Decreasing	<i>Archidendron pauciflorum</i> (Benth.) I.C.Nielsen	Danyin(B)	Tree	L, Fr & W	Raw, Food, Powder	Oral, Topical	Dysentery (D) Skin problems(S) itchy (S) Ulcers (A)	1 1 1 1

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104	Fabaceae (LC) Stable	<i>Bauhinia purpurea</i> DC. ex Walp.	Swedaw-ni (B)	Tree	L	Decoction	Oral	Diabetic(T) Analgesic (A) Diarrhea (D) Rheumatism(R)	2 1 1 1
105	Fabaceae	<i>Bauhinia variegata</i> L.	Bwe chin(B)	Tree	L & R	Decoction	Topical	Skin disease (S) Ulcers (A)	1 1
106	Fabaceae	<i>Butea superba</i> Roxb. ex. Willd.	Pauk-nwe (B) Paw- toh- kaw(L)	Vine	R & B	Decoction	Oral	Diarrhea (D) Difficult urination (U) Fever (A)	1 1 1
107	Fabaceae	<i>Cajanus cajan</i> (L.) Mills	Pe-sin-gon(B)	Shrub	L & S	Food	Oral	Blood pressure (B) Inflammation (L)	1 1
108	Fabaceae (LC) Stable	<i>Cassia fistula</i> L.	Ngu-shwe (B)	Tree	B & Fr	Decoction, Juice	Oral, Topical	Constipation (D) Pruritus(S) Flatulence(D) Hypertension (K)	2 2 1 1
109	Fabaceae (NT) Decreasing	<i>Dalbergia cultrata</i> T.S.Ralph	Yindaik (B)	Tree	W	Decoction, Boiling	Oral, Bathing	Fuel, Furniture Diarrhea (D) Dysentery(D) Herpes (S) Rheumatism (L) Arthritis (L)	1 2 1 1 1 1
110	Fabaceae (NT) Decreasing	<i>Dalbergia fusca</i> Pierre	Yinzat(B)	Tree	W	Fuel, Furniture	-	wheels, agricultural implements, spear- handles	7
111	Fabaceae (LC)	<i>Dalbergia</i> <i>cana</i> var. <i>kurzii</i> (Pr ain) Niyomdham	Thitpok(B)Thit nyo(L)	Tree	W	Fuel, Furniture	-	wheels, agricultural implements, spear- handles	6
112	Fabaceae (LC)	<i>Dalbergia ovata</i> Graham ex Benth.	Madama	Tree	W	Juice, Eye- drop	Oral, Nasal	Anthelmintic (A) Eye disease (F) Nose disease (R)	1 1 2
113	Fabaceae (LC)	<i>Dalbergia sissoo</i> Roxb. ex DC.	Kalar -padauk(B)	Tree	L, R & W	Powder, Decoction	Oral	Sore throats (A) Dysentery (D) Inflammation (L) Skin diseases (S) Gonorrhea (U)	2 1 1 1 1
114	Fabaceae (LC)	<i>Dalbergia</i> <i>stipulacea</i> Roxb.	Ta ma lan nwe(B) Kazinwe(L)	Tree	W & L	Raw, Juice	Oral	Fever (A) Body ache (L)	3 2
115	Fabaceae	<i>Derris floribunda</i> (Miq.) Benth.	Kyar ma naing (L)	Vine	L & R	Decoction, Juice	Oral	Malaria (A) Chronic paralysis (T) Fever (A) Sores (S)	1 1 1 1
116	Fabaceae	<i>Entada rheedei</i> Spreng	Doe(B)	Vine	W & S	Decoction, Rice water	Topical	Inflammation (L) Against ulcer (D)	
117	Fabaceae (LC) Stable	<i>Erythrina variegata</i> L.	kathit(B)	Tree	B	Decoction	Oral	Fever(A) Toothache(A) liver problems(B) Rheumatism (T)	3 1 2 1
118	Fabaceae (LC)	<i>Indigofera</i> <i>heterantha</i> Wall.ex Brandis	Meyaing (B)	Shrub	S & R	Powder, Decoction	Oral, Topical	Stomach diseases(D) Headache (A) Chest pain (A) Urine disease(U) Antidote (A)	1 1 1 1 1
119	Fabaceae	<i>Leucaena</i> <i>leucocephala</i> (Lam.) de Wit	Bawzagaing (B)	Tree	L & Fr	Food, Decoction	Oral	Anthelmintic (D)	3
120	Fabaceae (LC) Stable	<i>Millettia</i> <i>macrostachya</i> Collett & Hemsl.	Yae-thin-win (B)	Shrub	L, Fl & Fr	Decoction	Oral, Topical	Antidote (A) Ulcers(A) Skin disease(S)	1 1 1
121	Fabaceae (LC) Stable	<i>Mimosa pudica</i> L.	Tikayon (B)	Herb	Wp	Decoction, Instant, Food	Oral	Dysuria (U)	33
122	Fabaceae	<i>Mucuna</i> <i>macrocarpa</i> Wall.	Doe nwe (B) Gone thee(L)	Vine	Fl, L & Fr	Decoction, Rice water	Topical	Inflammation (L) Against ulcer (D)	1 1
123	Fabaceae (LC)	<i>Parkia speciosa</i> Hassk.	Myaukngo(or) Chindanyin(B)	Tree	Fr	Food	Oral	Diabetes (U) Hypertension (K) kidney problems (B)	3 2 2
124	Fabaceae	<i>Senegalia rugata</i> (Lam.) Britton & Rose	Kinmun- gyin(B) Thaphan(L)	Shrub	F & L	Food, Decoction	Oral	Asthma (R) Cough (R)	6 6

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125	Fabaceae (LC) Stable	<i>Senna alata</i> (L.) Roxb.	Thinbaw-mezali (B)	Tree	L & Fl	Instant, Decoction, Food, Raw, Juice	Oral, Topical	Constipation(D) Diarrhea (D) Dyspepsia(D) Flatulence(D) Hemorrhoid (K) Ulcers(S) Skin disease(S)	30 1 2 2 1 1 2
126	Fabaceae (LC)	<i>Senna sulfurea</i> (DC.ex Collad.) H.S.Irwin & Barneby	Pyiban-nyo(B)	Tree	L	Decoction, Food	Oral	Flatulence(D)	1
127	Fabaceae	<i>Senna tora</i> (L.) Roxb.	Dangywe (B)	Shrub	Wp	Food, Decoction	Oral	Tonic (T)	1
128	Fabaceae (DD)	<i>Sesbania grandiflora</i> (L.) Poir.	Pauk-pan-phyu (B)	Small tree	Fl & L	Food, Juice, Decoction	Oral, Topical	Gum inflammation(D) Hypertension(K) Constipation(D) Dysuria (U)	2 2 1 2
129	Fabaceae (51) (LC)	<i>Tadehagi triquetrum</i> (L.) H. ohashi	Lauk thay(B)	Shrub	L & R	Instant, Decoction, Juice	Oral, Topical	Hematemesis (D) Tuberculosis (A) Hepatitis B Virus(D) Asthma (R) Cough(R) Weight loss (T) Dysuria (U) Renal disease (U) Urinary tract infection(U)	1 7 1 3 24 1 1 11 1
130	Fabaceae (LC) Stable	<i>Tamarindus indica</i> L.	Magyi(B)	Tree	L & B	Food, Juice	Oral, Topical	Skin disease (S)	3
131	Fabaceae (LC) Stable	<i>Vachellia farnesiana</i> (L.) Wight & Arn.	Nan-lon kyaing (B) Maw-nawn- hkam(L)	Sh	Rt	Dec	Oral	Antidote (A)	2
132	Fagaceae (LC) Stable	<i>Castanopsis indica</i> A.DC.	Gone (L)	Tree	W& L	Decoction, Powder	Oral	Stomach disorder (D) Skin diseases (S) Diarrhea (D) Headache (A)	2 1 1 1
133	Fagaceae (LC)	<i>Castanopsis tribuloides</i> (Sm.) A.DC.	Thit-e(B) Gone (L)	Tree	Fr &W	Food, Fuel	Oral		3
134	Fagaceae (LC)	<i>Quercus helferiana</i> A.DC.	Yin-ku (B)	Tree	W	Fuel, Charcoal, Timber			6
135	Fagaceae	<i>Quercus semiserrata</i> Roxb.	Watt – Thit -Sha (B)	Tree	L & W		Fuel wood and Timber L- good fodder		10
136	Fagaceae (LC)	<i>Quercus serrata</i> Thunb.	Nyan(B)	Tree	W & B	Decoction	Oral	Diabetes (U) Dysmenorrhea (B) Inflammation (L) Urinary tract infection (U)	2 1 1 3
137	Hypoxidaceae	<i>Hypoxis aurea</i> Lour.	Taung htan(B)	Herb	Wp	Decoction	Oral	Gonorrhea (U)	2
138	Juglandaceae (LC)	<i>Engelhardia spicata</i> Lechen ex Blume	Thit swele(B)	Tree	L, B, R & W	Juice	Topical	Ulcers (S) Dysentery (D) Rheumatism (T) Dyspepsia (D)	1 2 1 1
139	Lamiaceae	<i>Basilicum polystachyon</i> (L.) Moench	Pin-sein-tha- lay(B)	Herb	L & B	Decoction	Oral	Rheumatism (T) Neuropathy (L) Sores in the mouth (B)	1 1 1
140	Lamiaceae	<i>Cleodendrum indicum</i> (L.) Kuntze	Nga-yantpatu (B)	Shrub	L	Decoction, Food, Juice	Oral, Topical	Diabetic (T) Cholera (D) Edema(U) Abdominal pain (D)	4 2 1 1
141	Lamiaceae	<i>Cleodendrum sp.</i>	Kyar- ma- naing(B)	Tree	L	Juice	Topical	Joint ache (L)	1
142	Lamiaceae (LC)	<i>Gmelina arborea</i> Roxb. ex Sm.	Yemane(B)	Tree	Wp	Decoction	Oral	Digestion (D) Fever (A)	1 1

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								Dyspepsia (D) Hemorrhoids (T) Stomachal (D) heart diseases (K) Nervous disorders (L) Skin Burning (S)	1 1 1 1 1 1
143	Lamiaceae	<i>Leucas cephalotes</i> (Roth). Spreng	Pin-gu-hteik-peik (B)	Herb	Wp	Decoction, Juice, Eye- drop	Oral, Bathing, Eye	Fever (A) Eye disease (F)	1 1
144	Lamiaceae	<i>Ocimum americanum</i> L.	Pin- sein(B)	Herb	L & Rt	Decoction, Food	Oral	Cough (R) Adver(A)	4 1
145	Lamiaceae	<i>Rotheca serrata</i> (L.)Steane & Mabb.	Yin- byar(B)	Shrub	L & Rt	Decoction, Instant	Oral, Bathing	Analgesic(A)	1
146	Lauraceae (LC) Stable	<i>Cinnamomum bejolghota</i> (Buch- Ham.) Sweet	Na-lin-gyaw (B)	Tree	R	Juice, Decoction	Oral, Topical	Mouth ulcer (D) Dysentery (D) Rheumatism(R) Ulcers(S)	1 1 1 1
147	Lauraceae	<i>Camphora officinatum</i> Boerh. ex Fabr.	Payok(B)	Tree	S & O	Decoction	Oral, Mouthwash	Fever (A) Convulsions (L) Stroke (T) Laryngeal pain (R) Mouth pain(D)	1 1 1 1 1
148	Lauraceae (LC)	<i>Litsea glutinosa</i> (Lour.)C.B.Rob.	Ohndon(B)	Small tree	L & B	Decoction, Powder	Oral	Diarrhea (D) Pains (A) Skeleton (T)	2 1 1
149	Lauraceae (LC)	<i>Persea Americana</i> Mill.	Htaw pat thi (B)	Tree	L, Fr & S	Food, Decoction	Oral, Topical	Menorrhagia (X) Hypertension (K) Stomach ache (D) Diarrhea (D) Diabetes (T)	1 2 1 2 1
150	Loganiaceae	<i>Strychnos potatorum</i> L.f.	Khabaung yay-kyi (B)	Tree	S & R	Decoction	Oral	Flatulence (D) Liver (B) Diabetes (T) Diarrhea (D) Dysentery (D) Renal disorders (L)	1 2 2 3 1 1
151	Lythraceae (LC)	<i>Lagerstroemia villosa</i> Wall. ex Kurz	Zaung-ba-lwe (B)	Tree	W	Pounding, Eye- drop	Oral, Eye - drop	Cancer (B) Piles (T) Scabies(S) Sore eyes(F)	1 1 1 1
152	Magnoliaceae (LC)	<i>Magnolia champaca</i> (L.) Baill. Ex Pierre	Saka-wah (B)	Tree	Wp	Decoction	Oral	Urine disease (U)	1
153	Magnoliaceae	<i>Magnolia x alba</i> (DC.) Figlar	Saka-phyu(B)	Tree	L, B, Fl & R	Decoction, Powder	Oral	Headache (A) Sinusitis (T) Cough (R) Inflammation (L) Flatulence (D) Nausea (A) Vaginal discharge (X)	1 1 2 2 1 1 3
154	Malpighiaceae (LC) Stable	<i>Hiptage benghalensis</i> (L.) Kurz.	Bein nwe(B)	Vine	L & B	Decoction	Oral, Topical	Ulcers(S) Scabies (S) Cough (R) Rheumatism (K) Hyperdipsia (L)	1 1 1 1 1
155	Malvaceae (LC)	<i>Colona floribunda</i> (Kurz) Craib	Phet Hla(B) Pet- shat (L)	Tree	W	Fuel, Furniture			5
156	Malvaceae (LC)	<i>Firmiana colorata</i> (Roxb.) R.Br.	Wet- shaw(B)	Tree	L & S	Decoction, Juice	Oral	Cure jaundice (T) Cholera (B)	1 1
157	Malvaceae	<i>Hibiscus rosa- sinensis</i> L.	Khaung- yan(B)	Shrub	L	Decoction, Juice	Oral, Topical	Fever (A) Cough(R) Scar(S) Hepatitis B virus(D)	1 1 1 1
158	Malvaceae (LC)	<i>Sterculia versicolor</i> Wall	Shawphyu(B)	Tree	S & B	Food	Oral	Laxative (D)	1
159	Marattiaceae	<i>Angiopteris evecta</i> (G. Forst.) Hoffm	Say-myin- khwar(B)Thit min(L)	Creep er	Tu	Decoction, Honey	Oral	Longevity(A)	1

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160	Melastomataceae	<i>Melastoma malabathricum</i> L.	Say-obokey(B)	Shrub	Wp	Decoction	Oral, Bathing	Cancer(B) Malaena stool (U)	7 1
161	Meliaceae (LC)	<i>Amoora rohituka</i> (Roxb.) Wight & Arn	Thitni(B)	Tree	B & W	Decoction	Oral	Chronic constipation (D)	1
162	Meliaceae (LC)	<i>Azadirachta indica</i> A.Juss.	Tama(B)	Tree	L	Powder, Decoction, Roast, Food	Oral, Mouthwash Bathing	Malaria(A) Toothache(D) Pruritus (S) Diabetic(T)	1 3 6 2
163	Meliaceae (VU) Decreasing	<i>Cedrela odorata</i> L.	Taung tama(B)Mae yone(L)	Tree	W & B	Decoction	Oral	Diarrhea (D) Fever(A) Inflammation(L) Indigestion (D)	1 1 1 1
164	Meliaceae (LC) Stable	<i>Melia azedarach</i> L.	Pan-tama (B)	Tree	W	Powder	Topical	Leprosy(S) Ulcers(S)	1 1
165	Meliaceae (LC)	<i>Sandoricum koetjape</i> (Burm.f.) Merr.	Thitto(B)	Tree	B	Decoction, Instant	Oral	Abdominal pain (D) Hypertension (K)	1 1
166	Menispermaceae	<i>Tinospora cordifolia</i> (Willd) Hook.f.& Thomson	Sindone manwe(B) lat- kah nwe(L)	Vine	Wp	Powder, Honey, Decoction, Syrup, Palm sugar	Oral, Topical	Longevity (A) Malaria (A) Abdominal pain(D) Dyspepsia (D) Flatulence(D) Liver disease(D) Gastritis (D) Eye disease(F) Hypertension(K) Bone fracture(L) Joint ache (L) Paralysis(N) Cough(R) Diabetic(T) Tonic(T)	7 1 1 9 8 1 1 1 15 2 2 4 1 23 11
167	Molluginaceae (LC) Stable	<i>Glinus oppositifolius</i> (L.) Aug.DC.	Gangalar(B)	Herb	Wp	Food, Decoction, Instant	Oral	Constipation (D) Dyspepsia(D) Flatulence(D) Gastritis (D)	1 2 4 5
168	Molluginaceae	<i>Mollugo verticillata</i> L.	Sulanaphar(B)	Small tree	Wp	Decoction	Oral	Fever (A) Aches(A)	3 2
169	Moraceae	<i>Artocarpus chaplasha</i> Roxb.	Taw-peinne (B)	Tree	Wp	Decoction, Food	Oral, Topical	Diarrhea (D) Ulcers (S) Skin diseases (S)	1 1 1
170	Moraceae (LC) Stable	<i>Broussonetia papyrifera</i> (L.)	Thale(B)Mae-sail-ae(L)	Small tree	L, R, B & W	Decoction	Oral	Diuretic (U) Inflammation (L)	1 1
171	Moraceae (LC) Stable	<i>Ficus auriculata</i> Lour.	Thapan(B)Myint thaphan(L)	Shrub	L & Fr	Decoction, Food	Oral, Topical	Diabetes (U) Diarrhea (D) Mumps (T)	1 1 1
172	Moraceae (LC) Stable	<i>Ficus glaberrima</i> Blume	Nyaung khwe-sar(B)	Tree	B, Re & R	Fiber			3
173	Moraceae (LC) Stable	<i>Ficus racemosa</i> Lour.	Ye- thapan -gyi(B)	Tree	L & Fr	Decoction, Food	Oral, Topical	Dysentery (D) Diarrhea (U) Ulcers(S)	1 2 1
174	Moraceae (LC) Stable	<i>Ficus rubiginosa</i> Desf.ex Vent	Nyaung - thabye (B)	Tree		Shady Tree			3
175	Moraceae (LC) Stable	<i>Ficus virens</i> Aiton	Nyaung shin(B)	Tree	L & B	Food, Decoction	Oral	Leucorrhea (B) Ulcers(S)	1 1
176	Moraceae (LC) Stable	<i>Morus alba</i> L.	Posa (B)	Tree	F, R & L	Decoction	Oral	Dizziness(A) Liver and kidney disorders (B) Inflammation (L)	1 2 1
177	Moraceae (LC) Stable	<i>Streblus asper</i> Lour.	Okhne(B)	Tree	R	Powder, Honey, Decoction	Oral	Filariasis (T) Leprosy (S) Toothache (A) Diarrhea (D) Dysentery (D) Cancer (B)	1 1 2 1 1 1
178	Moringaceae(LC)	<i>Moringa oleifera</i> Lam.	Dant - tha- lun(B)	Tree	Wp	Food	Oral, Eye - drop	Hypertension (K) Eye diseases(F)	1 1

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179	Myrtaceae (LC) Stable	<i>Corymbia torelliana</i> (F.Muell.) K.D.Hill & L.A.A.Johnson	Pyi lone chan tha(B)	Tree	W	Fuel, Furniture			5
180	Myrtaceae (LC) Stable	<i>Melaleuca viminalis</i> (Sol.ex Gaertn.) Bymes	Payok(B)	Tree	L	Decoction	Oral	Diarrhea (D) Dysentery (D) Rheumatism(T)	2 2 3
181	Myrtaceae (LC)	<i>Psidium guajava</i> L.	Malaka(B)	Tree	L & Fr	Food, Juice	Oral, Nasal, Topical, Mouthwash	Dizziness(N) Headache (N)	4 2
182	Myrtaceae (LC) Stable	<i>Syzygium cumini</i> (L.) Skeels	Thabye- phyu(B)	Tree	Fr & B	Food, Decoction	Oral	Diarrhea (D) Dysentery (D) Digestive (D) Fever (A)	2 3 1 3
183	Myrtaceae	<i>Tristaniopsis burmanica</i> (Griff.) Peter G.Wilson & J.T.Waterh.	Taung -thabye(B)	Shrub	L & W	Fuel, Furniture			5
184	Nyctaginaceae	<i>Mirabilis jalapa</i> var.	Myitzu(B) Myae zu (L)	Herb	Wp	Powder, Honey, Decoction	Oral, Topical	Inflammation (L) Blight disease(Y) Urine disease(U) Fracture (T)	1 2 2 1
185	Ochnaceae	<i>Ochna serrulate</i> (Hochst.) Walp.	In-daing-sani(B)	Shrub	W & B	Decoction	Oral, Topical	Fracture(T)	1
186	Oleaceae	<i>Jasminum multiflorum</i> (Brum.f.) Andrews	Taw Sabe(B)	Shrub	Fl	Decoction	Oral	Ulcers (S) Emetic (A)	1 1
187	Orchidaceae	<i>Cymbidium lowianum</i> (Rchb. f.)	Pann -thet- she(B)	Epiph yte	Other	Flower	Making Perfume and cosmetics		3
188	Orchidaceae (LC)	<i>Dendrobium aphyllum</i> (Roxb.) C.E.C. Fisch.	Kha -mauk- kyo(B)	Epiph yte	Other	Ornamental			5
189	Orchidaceae	<i>Dendrobium chrysotoxum</i> Lindl.	Shwet- pauk khan- wa(B)	Epiph yte	L	Decoction, Ornamental	Oral	Gastric cancer (B)	1
190	Orchidaceae	<i>Dendrobium lindleyi</i> Steud.	Yadanar shwe ket(B)	Epiph yte	Other	Ornamental			4
191	Orchidaceae	<i>Hygrochilus parishii</i> (Rchb.f.) Pfitzer	Taungkayamet thitkwa(B)	Epiph yte	Other	Ornamental			5
192	Orchidaceae	<i>Vanda lilacina</i> Teijsm.& Binn.	Moepyargalay(B)	Epiph yte	Other	Ornamental			4
193	Oxalidaceae (DD)	<i>Averrhoa carambola</i> L.	Zaung-yar (B)	Tree	Fr & R	Syrup, Food, Palm sugar	Oral	Dyspepsia(D) Cough(R) Intrahepatic stone(U) Gall stone(U)	1 1 1 3
194	Papaveraceae	<i>Argemone mexicana</i> L	khaya or kone- kha-yar	Herb	L, Fl, R & S	Decoction	Oral	Cough (R) Malaria (A) Ulcer (S) Skin disease (S)	3 3 2 1
195	Pentaphylacaceae (LC) Stable	<i>Anneslea fragrans</i> Wall.	Pan-ma (B) Taung -kantkaw(L)	Tree	Fl, B & R	Food, Decoction	Oral	Diarrhea (D) Fever(A) Liver disease (B)	1 1 1
196	Pentaphylacaceae	<i>Eurya acuminata</i> DC.	Htaw-labut(B)	Shrub	L	Decoction	Oral, Topical	Ulcers(S) Dysentery (D) Diarrhea (D) Typhus (T) Sore throat (R)	1 1 1 1 1
197	Phyllanthaceae (LC) Stable	<i>Antidesma acidum</i> Retz.	Kinbalin(B)	Tree	F & L	Raw	Oral	Dysentery (D) Kidney stone (B)	1 1
198	Phyllanthaceae (LC) Stable	<i>Bischofia javanica</i> Blume	Ye- padauk(B)Ye padone(L)	Tree	Wp	Decoction	Oral	Tuberculosis (R) Stomach ulcer (D) mouth ulcer (S)	1 1 1
199	Phyllanthaceae (LC) Stable	<i>Bridelia retusa</i> (L.)A.Juss.	Seik che(B)	Small Tree	Stem	Fuel	-	-	5
200	Phyllanthaceae (LC)	<i>Glochidion coccineum</i> (Banks) Mull.Arg.	Tamasok (B)	Shrub	L& fr	edible	Oral	-	4
201	Phyllanthaceae (LC) Decreasing	<i>Phyllanthus emblica</i> L.	Zibyu(B)Shar phyu(L)	Tree	Wp	Food, Decoction, Powder, Instant	Oral	Constipation(D) Cough(R)	1 3

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								Diabetic(T) Menstrual disorder(X)	3 2
202	Phyllanthaceae	<i>Phyllanthus niruri</i> L.	Myae- zibyu(B)	Herb	Wp	Decoction, Instant	Oral	Hepatitis(D) Jaundice(D) Liver disease(D) Diabetic(T) Dysuria(U) Gall stone(U) Urinary tract infection(U)	3 6 2 1 2 1 1
203	Piperaceae	<i>Peperomia pellucida</i> (L.)Kunth	Kyauk- thin- pon(B)	Herb	Wp	Decoction	Oral	Intrahepatic stone(U) Urinary tract infection(U)	3 7
204	Piperaceae	<i>Piper longum</i> L.	Taw peik chin(B)	Shrub	Fr & R	Decoction, Powder	Oral	Fever (A) Malaria (A)	3 2
205	Piperaceae	<i>Piper nigrum</i> L.	Nga- yok- kaung(B)	Vine	S	Food, Powder	Oral	Fever (A) Malaria (A) Toothache(D)	1 2 2
206	Plantaginaceae	<i>Scoparia dulcis</i> L.	Dana- thukha(B)	Herb	Wp	Powder, Food	Oral	Toothache (D) Urinary tract infection(U) Diabetes (U) Fever(A)	1 1 1 1
207	Plumbaginaceae	<i>Plumbago zeylanica</i> Linn.	Khan- gyok- phyu(B)	Shrub	Wp	Powder	Oral	Paralysis(N)	1
208	Poaceae	<i>Cymbopogon citratu</i> s (DC.) Stapf	Sabalin(B)	Herb	Wp	Juice	Topical	Bone fracture (L)	2
209	Polygonaceae	<i>Polygonum aviculare</i> L.	Pu -zun- sa(B)	Herb	R	Juice, Decoction	Oral, Nasal	Bleeding of the nose (R) Dysentery (D)	1 1
210	Polygonaceae	<i>Persicaria chinensis</i> (L.) H.Gross	Maharka- kyansitt(B)	Herb	R	Food, Juice, Instant, Decoction	Oral, Topical	Antidote(A) Hypertension (K) Skin disease(S) Blood tonic(T) Diabetic(T)	2 1 1 4 1
211	Primulaceae (LC)	<i>Ardisia elliptica</i> Thunb.	kyetmaok(B)	Shrub	L, Fr & Fl	Raw, Food, Juice	Oral, Ear-drop	liver cancer(D) Swelling (T) Earache (H) Cough(R) Fever(A) Diarrhea(D) Broken bones (T)	1 1 1 1 1 1 1
212	Proteaceae (LC) Stable	<i>Grevillea robusta</i> A.Cunn.ex. R.Br.	Khar- daw- hmi(B)	Tree	L, B & W	Juice, Decoction	Oral, Ear-drop	Sore throats (A) Earache (H) Chest problems (A) Flu(A) Toothache(D) Headaches(A)	1 1 1 1 1 1
213	Putranjivaceae (LC)	<i>Putranjiva roxburghii</i> Wall.	Daukyat(B) Pa- de- phyu (L)	Tree	L	Decoction, Juice	Oral, Eye- drop	Diseases like Elephantiasis (T) Constipation (D) Ophthalmic (F) Female genital (X)	1 1 1 1
214	Rhamnaceae (LC) Stable	<i>Ziziphus oenopolia</i> (L.) Mill.	Baung be- thee(B)Taw zee thee(L)	Shrub	Wp	Food, Decoction	Oral, Topical	Ulcers (S) Stomach aches (D) Mouthwash (D) Sore throats(R) Dysentery(D)	1 1 1 1 1
215	Rosaceae	<i>Malus indica</i> (Wall.) B.B.Liu	Pinsein- thi (B)	Tree	Fr	Food, Decoction	Oral, Topical	Cancer (B) Fever (A) Cough (R) Diabetes (U) Diarrhea (D) Hair tonic(S)	1 1 1 1 1 1
216	Rosaceae	<i>Malus pumila</i> Mill.	Pan- thi (B)	Small tree	Fr	Food, Decoction	Oral	Malaria (A) Diarrhea (D) Rheumatism (L)	1 2 1
217	Rosaceae (DD)	<i>Prunus domestica</i> L.	Metmann(B)	Small tree	Fr & S	Food, Decoction	Oral	Asthma (R) Arthritis (T)	1 2

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								Alzheimer (T) Anemia (B) Cardiovascular diseases (K)	1 1 2
218	Rosaceae (LC) Stable	<i>Rubus ellipticus</i> Smith.	Ngau- thee(B)Shan zee thee(L)	Shrub	Fr, R, B	Food, Decoction	Oral	Bronchitis (R) Ulcers (S) Diabetes (U) Diarrhea (D) Fractured bones (T)	1 1 1 1 1
219	Rubiaceae (EN) Decreasing	<i>Coffea arabica</i> L.	Coffee(B)	Small tree	S	Decoction	Oral	Stomach ache (D) Diarrhea (D) low blood pressure (B)	1 2 1
220	Rubiaceae (LC)	<i>Gardenia coronaria</i> Banks	Yin gat gyi(B)	Small tree	L	Decoction	Oral	Rheumatic (L) Bronchitis (R)	1 1
221	Rubiaceae (LC)	<i>Gardenia obtusifolia</i> Roxb. ex Kurz	Yin-gat-ka-lay(B)	Shrub	Fr	Decoction	Oral	Headaches (A) Fever (A) Inflammation (L) Hypertension (K)	1 1 1 1
222	Rubiaceae (LC)	<i>Ixora nigricans</i> R.Br.ex Wight & Arn.	Sagwe(B)	Shrub	Fl, L & R	Decoction	Oral	Dysentery (D) Leucorrhea (B) Bronchitis (R) Diarrhea (D)	1 2 1 1
223	Rubiaceae (LC)	<i>Morinda citrifolia</i> L.	Yeyo(B)	Shrub	L & Fr	Decoction, Instant, Food, Palm sugar	Oral	Blood circulation (A) Tuberculosis(A) Cancer(B) Dyspepsia (D)	5 1 1 2
224	Rubiaceae	<i>Mussaenda sanderiana</i> Ridl.	Pwint tu ywet tu(B)	Shrub	St	Decoction	Oral	Malaria (A)	1
225	Rutaceae (NT) Decreasing	<i>Aegle marmelos</i> (L.) Correa	Okshit(B)	Tree	L & Fr	Decoction, Juice with honey	Oral, Topical	Fever (A) Stomachache (D) Diarrhea (D) Dysentery (D)	1 2 2 3
226	Rutaceae (LC)	<i>Clausena excavata</i> Burm.f.	Pyindaw thein(B)	Shrub	L	Raw	Oral	Cancer (B)	3
227	Rutaceae (LC) Stable	<i>Clausena heptaphylla</i> (Roxb.ex DC) Wight & Arn.	Taw pyindaw thein(B)	Small Tree	L	Raw, Food, Powder	Oral, Topical	Headache (N) Muscle Pain (L)	1 2
228	Rutaceae (LC) Stable	<i>Harrisonia perforata</i> (Blanco)Merr.	Su chin(B) Ta- buu(L)	Shrub	L, B, R &W	Decoction	Oral	Diarrhea (D) Dysentery (D)	1 3
229	Saliaceae (LC) Stable	<i>Flacourtia indica</i> (Burm.f.) Merr.	Naywe(B)Latt - put(L)	Shrub	L, R, B &W	Decoction, Raw	Oral, Topical	Diarrhea (D) Snakebite (S) Stomach Pain (D) Cough (R)	1 2 2 1
230	Salicaceae (LC) Stable	<i>Salix tetrasperma</i> Roxb.	Moe makha(B) Yene (or) Yemae (L)	Tree	B, W & Fr	Decoction	Oral, Topical	Fever (A) Inflammation (L)	1 1
231	Santalaceae (VU) Decreasing	<i>Santalum album</i> L.	Natha phyu(B)	Small Tree	S	Powder, Oil	Oral, Topical	Inflammation (L) Liver (B) Blood purifier (B)	1 2 2
232	Santalaceae	<i>Viscum decurrens</i> (Engl.) Barker & Sprague	Kyibaung (B)	Shrub	B & W	Decoction	Oral	Hypertension (B) Gout (A) Heart disease (K)	2 2 1
233	Sapindaceae (LC)	<i>Aesculus assamica</i> Griff.	Yemyaw(B)	Tree	Fr, B, W & S	Decoction	Topical	Blood Pressure (B) Snakebite (S) Stomach ache (R)	1 2 1
234	Sapindaceae (LC) Stable	<i>Sapindus rarak</i> DC.	Kinbadee(B) Sat- pyar-thi-pin. (L)	Tree	Fr & S	Raw, Decoction	Topical	Soap, Detergent	3 3
235	Sapindaceae(LC) Stable	<i>Schleichera oleosa</i> (Lour.) Oken	Gyo(B)	Tree	S, B, W & S	Raw, Decoction	Topical	Farm Equipment Charcoal Inflammation(L) Itching (S)	1 1 1
236	Sapotaceae (LC) Decreasing	<i>Manilkara zapota</i> (L.) P. Royen	Sa-gya-thee-pin (B)	Tree	L & S	Decoction	Oral	Diarrhea (D) Cough (R) Fever (A) Dysentery (D)	1 2 1 1

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237	Solanaceae	<i>Solanum villosum</i> Mill.	Bauk-lauk-nyo(B)	Small tree	Wp	Pounding, Cooking	Oral, Topical	Cough (R) Diarrhea (D) Skin diseases (S) Flatulence (R) Stomachache(R)	10 2 2 12 12
238	Solanaceae	<i>Solanum americanum</i> Mill.	Khayankazaw(B)	Shrub	Wp	Raw, Decoction	Oral	Cough (R) Antidote (A)	1 1
239	Solanaceae	<i>Solanum torvum</i> Sw	Ka-sauk-kha (B) Ka- sauk (L)	Small tree	Wp	Powder, Decoction	Oral, Topical	Diabetes (U) Hypertension (B) Toothache (A)	1 2 2
240	Theaceae (LC) Stable	<i>Schima wallichii</i> (DC.) Korth.	Thit yah(B)Lauk - yah (L)	Tree	B & W	Decoction	Oral, Topical	Fever (A) Diarrhea (D) Stomach ache (D)	1 1 1
241	Urticaceae	<i>Boehmeria nivea</i> (L.) Gaudich.	Kyasha(B)	Shrub	L& R	Powder, Decoction	Oral	Inflammation (L) Diabetes (B) Wounds (A)	1 1 1
242	Verbenaceae	<i>Verbena tenera</i> Spreng.	-	Herb	Other			Hanging baskets Container	2
243	Vitaceae	<i>Cissus discolor</i> Blume	Ta- pin- daing - mya -nan(B)	Shrub	Wp	Power, Decoction	Oral	Various cancers (B) Malaria Fever(A) Gout Skin diseases (S) Wounds (A) Cancerous tumor (B) Edema (U)	10 3 1 1 2 2 20 8
244	Zingiberaceae (DD)	<i>Curcuma longa</i> L.	Nanwin (B)	Herb	Rh	Powder, Decoction	Oral, Topical	Diarrhea (D) Dysentery (D) Wounds (A) Insect Bite (S)	3 2 2 1
245	Zingiberaceae	<i>Zingiber montanum</i> (J.Koeni g) Link ex A.Dietr.	Meik- thalin (B)	Herb	Rh	Decoction, Pounding	Oral, Topical, Bathing	Joint pain (L) Postpartum care Disorder (X) Edema (U) Hypertension (B) Back pain Diarrhea (D) Inflammation in injury (L)	24 11 3 3 4 7

Notes: L = Leaves, B = Bark, W = Wood, S = Seed, Wp = Whole Plant, Fl = Flower,
Fr = Fruit, O = Oil, R = Root, Re = Resin, C = Cream, Rh = Rhizome