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Abstract - Limbuwan is the land inhabited and dominated by the indigenous Limbu people. The Limbu are very rich in ethno-medicinal knowledge and culture as well. The main objective of this work is to document the ethno-medicinal knowledge of the Limbu community with semi-structured interviews and questionnaire methods. A total of 225 species, in 191 genera and 92 families, in terms of life form, 100 herb species, 48 tree species, 46 shrub species and 25 climber species were documented as medicinal plants in Limbuwan. Among these, 52 species are used for the treatment of gastrointestinal disorders, 40 species for cut-wound-burn (CWB). The ethno-medicinal treatments are performed by Limbu healers (Phedangma) who have immense knowledge of ethno-medicine. Among the various categories, 112 species for oral administration, 92 species in extract form and root part of 67 species are used in Limbu community. This study found that the Limbu community uses more plants than other ethnic communities. Despite the efficacy of the indigenous knowledge it is gradually eroding day by day in the name of civilization.

Keywords : *community, limbu healer, medicinal plants, indigenous.*

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Dil Kumar Limbu [α] & Basanta Kumar Rai [σ]

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I. Introduction

The Limbu ethnic community belongs to the *Kirati* group of the Tibeto-Burman family. They are often wrongly believed to be an offshoot of the Mongol by those who misinterpreted some Western scholars' use of the term 'Mangol' or 'Mangoloid' to refer to the Limbu's complexion. Their home land or the land of origin used to be called *Pallo Kirat* (far Kirat) in the past, but now it is known by the name Limbuwan, which means 'Limbu land' in the Persian language. The Limbu are culturally very rich. They have their own cultural dances and songs. The Limbu are also rich in literature. They use a script called the Sirijunga script nomenclatured after its inventor Sirijunga. Their religion is called the *Kirat* religion.

The Limbu people reside near jungles and streams in the hills of Limbuwan because their lifestyle is overwhelmingly dependent on natural resources. Their territorial land covers mainly Sankhuwasabha, Tehrathum, Dhankuta, Taplejung, Panchthar and Ilam districts of Nepal, but a large number of the Limbu people also live outside Limbuwan, viz. Sikkim, Darjeeling and some part of the North East region of India.

The Limbu enjoyed a special system of land ownership called *Kipat* since time immemorial. They also had the right to local governance under the leadership of a village head man called Subba. Limbuwan was thus governed by different Subbas and was autonomous or semi-autonomous until a few decades ago. When the Land Reform Act was enforced in the *Limbuwan* area in 1965, the Limbus lost their power to land and local governance forever. Limbu communities have immense knowledge on ethno-medicine and a rich cultural, and food heritage (Bista, 1967; Subba, 1999a; Subba, 1999b). The Limbus have excellent traditional knowledge base (Rai et al., 2004) and extraordinary innovativeness. They have been using hundreds of plants for the treatment of diseases (Siwakoti, 1998), ranging from diarrhea, constipation to fracture. ***Phedangma, Shamba and Yeba-Yema*** are their sacred specialists (Limbu shamans). They have rich knowledge of diseases, their identification, and application of herbal medicines for their cure.

This knowledge is valuable not only to those who depend on it in their daily lives, but also to modern industry and agriculture. Many widely used products, such as plant-based medicines and cosmetics, are derived from traditional knowledge. Traditional knowledge can make a significant contribution to sustainable development. Most indigenous and local communities are situated in areas where the vast majority of the world's plant genetic resources are found. Their skills and techniques provide valuable information to the global community and a useful model for biodiversity policies. Furthermore, as on-site communities with extensive knowledge of local environments, indigenous and local communities are most directly involved in conservation and sustainable use.

Ethno-medicine is a set of empirical local practices on the basis of indigenous knowledge of a social group often transmitted orally from generation to generation. Ethno-medicinal knowledge on plant resources has been constantly diminishing because of changing perception of the local people, increasing influence of global commercialization and socio-economic transformation (Gadgil et al 1993; Kunwar and Adhikari 2005). Due to the lack of scientific

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harvesting, proper management techniques and lack of conservation awareness, the number of ethno-medicinal plants is decreasing (Kunwar and Duwadee 2003). All the people of Nepal have no access to allopathic medicine and health centre because of illiteracy, poverty and unavailability. Thus, about 80% of the population in Nepal relies on traditional medicine (Manandhar, 2002).

The main objective of this study was documentation and analysis of ethno-medicinal knowledge of the Limbu people of Limbuwan area and its vicinity.

a) Study Area

The research work was conducted in the Limbuwan area of Eastern Nepal. Limbuwan is an area of 14619 km^2 of the eastern part of the Nepal Himalaya, comprising Taplejung, Panchthar, Ilam, Jhapa, Tehrathum, Dhankuta, Sunsari, Morang districts and some parts of Sankhuwasabha ~~d~~District. Its geographic co-ordinate is 87° 12′ 36″ E to 88° 06′ 51″ E and 26° 22′ 12″ N to 27° 46′ N. Limbuwan borders the Arun and Koshi Rivers in the West, the Kanchenjunga Himalaya and Tibet of China in the north, the Mechi river in the east, and Bihar and West Bengal province of India in the south (Figure 1). The area is predominantly inhabited by indigenous Limbu people since time immemorial. Limbuwan falls under the southern aspect of the Himalaya range and humid climate which is suitable for luxuriant vegetation with diverse biodiversity. It is important to note that Limbuwan lies between the third highest peak of the world (Kanchenjunga: 8586 m) and the lowest point of the country (Kechana: 70 m).

II. Materials and Methods

The primary data were obtained on site through participant observations, semi-structured interviews (Key Informant and Focus Group), and questionnaires.

The secondary data were obtained from District Development Committee, different literature such as those from Central Bureau of Statistics, WHO, National Reports on CBD, ANSAB, IUCN, and various national and international journals dealing with ethno-medicine, biodiversity, traditional knowledge, and sustainable utilization of natural resources.

Fieldwork was carried out four times from January 2009 to December 2011. We used the methods from ethno-botany (Martin, 1995) and ethnography (Spradley, 1979). Prior informed consent was obtained orally from each informant. Information was collected through open-ended and semi-structured interviews in which topic guides, questionnaires, drawings, photographs and living plant materials were used as auxiliary resources. A participant observation technique was also applied. Identified specimens in the field were noted down. Unidentified specimens were collected and herbarium made. The plant herbaria were identified in National Herbarium House, Godawari, Nepal. Twenty key informants (Limbu people) were selected by consultation with knowledgeable persons of the study area and interviewed on issues relating to ethno-medicine (using a combination of semi-structured questionnaires and free-listing technique). Data were recorded in fieldwork books and, when possible, the interviews were also recorded on voice recorder.

III. Results and Discussion

A total of 225 species of medicinal plants were documented from the Limbuwan area. These were distributed among 191 genera and 92 families (Appendix). The species in the Appendix are arranged alphabetically by family and by genus. For each species, the common name(s), Limbu name, medicinal applications, used parts, mode of preparation, mode of administration and habit of medicinal plants are mentioned.

Numerous Limbu plant families contain a large number of species with reputed medicinal properties (Appendix). Families with the largest number of species are the following: Fabaceae (14 species), Cucurbitaceae (11species), Asteraceae (10 species), Lamiaceae, Poaceae, Rosaceae, (8 species), and Zingiberaceae, Euphorbiaceae and Moraceae (7 species) (Appendix). The majority of Limbu medicinal species are herbs (100 species), trees (48 species) and shrubs (46 species) (Figure 2). The most frequently used plant parts in the preparation of herbal remedies were roots (67 species), bark (40 species) and leaf (30 species) (Figure 5).

The most frequently elicited modes of preparation were extract (plant part smashed, crushed, or chopped and juice extracted: 92 species), paste (plant parts smashed, crushed and made paste: 63 species), soup (plant parts boiled: 14 species) and raw (plant part directly used without processing: 14 species) (Figure 3).

There were numerous ethno-medicinal plants used for the treatment of around 48 disorders in the Limbu community. Gastrointestinal treatment had the highest frequency of ethno-medicinal use (52 species). Cuts, burns and some other wounds were treated with 40 species and osteological disorders with 30 species. All the 48 disorders, regrouped into 15 on the basis of nature and physiology of disorders are given in Figure 6. In the Limbu community, Limbu healers (*Phedangma*), who are the ethno-medicine practitioners, also recite some magical words called "*mantra*" (in Nepali) during the treatment. It is considered that the use of the mantra increases the healing power of the herbal medicine and the treatment becomes more effective.

The most frequently used modes of administration of medicinal preparations were oral (112 species) and topical (62 species) (Figure 4). Oral and topical modes of administration were preferred because they were the easiest and the most effective in delivering bioactive compounds into the body.

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The plants described herein have tremendous ethno-medicinal significance. Their use in ethno-medicine has evolved largely by hit and trial process and some of these have very well stood the test of time. However, most of these plants are yet to be experimentally verified for their medicinal value. That is, the antibiotic-, bioactive-, and other properties of herbal medicine used by ethnic people needs to be tested. In other parts of the world, pharmaceutical industries have been continuously exploring new medicinal plant species and the associated traditional medicinal knowledge of the ethnic communities there. It can be surmised that many pharmaceutical industries may still be exploiting the IK (Indigenous knowledge) of the IPs (Indigenous Peoples) without any equitable benefit sharing mechanism. But such uses and practices are poorly documented. It is therefore important to document such uses and practices not only for enhancing conservation efforts but also for protecting IK erosion as well as misappropriation.

Limbu communities in the study area were found to be knowledgeable regarding the use of plants for various illnesses and ailments. A total of 225 species of ethno-medicinal plants of the Limbu community is reported in this work while the number of Limbu ethno-medicinal plants in the past reports are far below, e.g. 119 species (Limbu, 2008), 99 species (Maden et al, 2007) and 76 species (Siwakoti, 1998). The level of the Limbu cultural knowledge (as measured by the number of species interactions) may be compared to other ethnic groups living in similar environments in Nepal. For example, ethno-medicinal plants were reported to be of 119 species in the Newar community (Balami, 2004), 85 species in Magar (Magar, 2012), 85 species in Rai and 105 species in Yakkha (Maden et al, 2007). This shows that the Limbu community has far greater knowledge on ethno-medicinal practices as compared to other ethnic communities in Nepal. It must be noted that the Rai, Limbu and Yakkha communities are much closer to each other in term of kinship and settlement, as a result of which they share their indigenous knowledge and practices and some medicinal plants are common to them all.

IV. Treatment Process

In order to treat people, Limbu priests and shamans have developed various treatment methodologies depending on the nature of diseases and illness. These treatment processes have been developed through long time efforts which involved hit and trial practices and are now considered approved. They use different parts of plant in various forms, i.e. paste, extraction, decoction and raw, for treatment.

We have attempted to present responses to the use of different plants or their parts for the treatment of diseases. They are as follows:

Stomachache - A few respondents said that they used the fruit part of *chimphing* (*Heracleum wallichii*,). Most of the respondents said that they resorted to *dhami-jhankri* (witch-doctor). The knowledge gap in the treatment of stomachache is explicable because stomachache results from various reasons and no single medication is applicable to all cases. Under such circumstances, the trial-and-error method used by the natives cannot be expected to produce the results that can be easily generalized.

Fever - Most informants said that they use the infusion of ***chiraito*** (*Swertia chirayita*). This treatment is effective against headache also. This finding suggests that there exists a void in the transmission/dissemination of traditional knowledge. People seemed to relate persistent bitterness of plants to cure fever. This plant contains several bitter compounds like ophelic acid, chiratin (glucoside), amarogentin (glucoside), and swerchirin as the active component (Anon, 2002). In Nepal, this plant (unprocessed) is used for the treatment of fever and malaria (Anon, 2006).

Fracture - A number of items were named by the respondents for the treatment of fracture, viz. bark of ***mahuwa*** /***mauwa*** (*Engelhardia spicata*), honey, eggs, milk, mistletoe or ***hadchoor*** (*Viscum album*), ***pakhanbhed*** (*Bergenia ciliata*), horsetail or '***sallibisalli'/ghodpuchre*** (*Equisetum sp.*), ***bhuinchampa*** (*Kaempferia rotunda*), bark, and snails. Information on active ingredients from some of the above plants is available. ***Sallibisalli*** is known to contain salicic acid, nicotine, palustrine, palustridine, sterols and malic acid. These ingredients have antimicrobial, antiseptic, and anti-inflamatory effects. Traditional uses of the ***hadchoor*** bark have been mentioned by various authors (e.g. Widmann et al., 2003; Bishokarma et al., 2001), but details on its chemical composition and active ingredients are not available.

Dental problem (Tootache) - All the interviewees named clove oil and the oil of ***timur*** (*Zanthoxylum armatum)* as the most effective medicine. Other options included the latex from ***saruwa kadam*** (*Jatropha curcas*), extracts from the rhizome of ***kaalo unyu*** (*Tectaria macrodonta*), ***pire jhaar*** (*Spilanthes acmella*), ***tulasi*** (*Osimum sanctum*), and guava bark. Some informants mentioned of *tantrik* (one who castes spells) treatment also. Traditionally, it is believed that toothache is due to worms and the latter can be removed by a combination of ***tantrik*** method and herbal medication.

Epistaxis (nosebleed) - This condition occurs occasionally and there are several reasons for leading to this condition. Minor irritation and rupture of small veins of the septum of the nose are the main reasons. These veins may rupture spontaneously, or the rupture may be caused by a cough or sneeze that raises the blood

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pressure inside the veins of the nose. People drop extracts from *dubo* (*Cynodon dactylon*) or *titepati* (*Artemisia indica*) into the nostrils for stopping the nosebleed. It is common to plug the nostrils with rolled leaves of *titepati* to clot the blood. Some informants mentioned that they rub soot from the mud (or stone) tripod of traditional firewood stove on the forehead. The details of reactions that may/may not take place when plant extracts are administered are a subject of further study (except that they have proven antiseptic property) but the use of soot appears to have a psychological role.

Scabies - Scabies is a contagious skin disease caused by itch mite (*Sacroptes scabiei)*. The disease is characterized by intense itching. To counteract this itching, people resort to different herbal medicines People use the juice squeezed from *titepati* (*Artemisia indica*), *bojho* (*Acorus calamus*), or *angeri* (*Lyonia ovalifolia*) shoots. *Angeri* is a very potent medicine but it gives an intense burning sensation. For the sensitive ones, treatment with *angeri* can be very agonizing and therefore care must be taken during its administration. According to some people, *angeri* is simply an absolute medicine for scabies. Modern treatments of scabies involve topical application of lotions containing permethrin and lindane.

Burns - Many natives have heard about the use of *ghiu kumari* (*Aloe vera*), and some of them use it. *Babari* (*Ocimum basilicum*) juice, *harro* (*Terminalia chebula*) oil, *ghoda khori* (*Lyonia ovalifolia*) oil and *saruwa kadam* (*Jatropha curcas*) sap are also used. As to *Aloe vera*, the use of it is also prevalent in other regions of Nepal and it appears that the practice is not indigenous to the study site. These medicines may have chemicals the topical application of which may lessen the pain or hasten the healing but this needs further study to validate it.

Jaundice - Jaundice results from various conditions, but all of them stem from the health of the liver. The patients are encouraged to drink black sugarcane juice and eat a lot of papaya. This is justifiable because the liver is weak, and easily assimilable forms of foods are needed under these conditions. The 'functional ingredients' found in these foods may well play complex and synergistic role in speeding up the recovery. Besides diet regimen, they also administer the juice of *amarlata* (*Cuscuta reflexa*) and aqueous extracts of *ban ghiraula* (*Trichosanthes cucumerina*) as modest doses.

Amarlata is a yellow-colored epiphytic plant that finds an important place in *ayurveda*. It is used in bilious disorders (Chopra, 1986), protracted fever, and also as a purgative (Chopra, 1986; Manandhar, 2002). The use of this plant in the treatment of jaundice may have relation to the sensory property of this plant, namely its golden color. Recently, Ali (2004) has carried out a very extensive study on the components of *amarlata*, in which 26 components were isolated. The author has also discussed the anticancer properties of some of these components.

According to Chadha (1976), the root of *ban ghiraula* is used as a cure for bronchitis, headache, and boils. Both the root and fruit are considered cathartic. Leaves are used in biliousness.

Dysentery - The natives use **pakhandbhed** (*Bergenia ciliata*), **lalchan** or **belchanda** (*Hibiscus sabdariffa*), guava barks/leaves, and rhizomes of **kaalo unyu / kaalo nigure** (*Tectaria macrodonta*). The oral administration of the above-mentioned herbs may have actions similar to antibiotics that are used to combat dysentery. **Lalchan** can be eaten as such but the rhizomes of **kaalo nigure** are first rubbed on a stone with some water and the slurry that results is taken orally.

Among other things, ***belchanda*** contains gossypetin, hibiscin, anthocyanins, pectic substances, vitamin C and many other organic acids.

Recent researches show that guava contains more than 20 identified components. Its leaves contain β-selinene, guajavarin, quercetin (and a number of flavonoids), to name but a few. Reports validate that guava leaf and bark extracts can be effective against hypertension and diarrhea (Belemtougri, 2006).

Tonsillitis - Tonsillitis, incorrectly called 'tonsil' by the natives, is the inflammation of tonsils of the mouth, caused by either bacteria or virus. The natives believe that chewing a corn seed is beneficial for tonsil. ***Abhijaalo*** (Limbu name: ***wana***) (*Drymaria cordata*) can also be chewed to soothe the pain. These medicines most probably work by destroying/inhibiting the causative organisms, much like the antibiotics used in allopathic treatment.

Ding et al (2005) have discussed the presence of 3 cyclic peptides and 4 flavone glucosides (drymareatin A, B, C, and D) in the ***abhijaalo*** plant. The plant is also used by the Chinese in the treatment of acute hepatitis (Ding et al., 2005).

Sinusitis - Sinusitis is a skull disease that occurs due to inflammation (caused by bacterial infection) of the membrane lining a sinus of the skull. A plant called ***haachhyun jhaar*** (*Dichrocephala integrifolia*) is very popular but this is not a permanent remedy. The plant induces sneezing, which temporarily relieves the condition. Some people also said that they administer the juice of ***ban ghiraula*** (*Trichosanthes cucumerina*) through the nostrils. Hot salt water was reported to stabilize the complication.

Boils/Abscess - In the survey, it was found that people deliberately made boils more septic by topically applying ***murcha*** (Yeast cake), etc. Sometimes, a kind of paste prepared from ***amliso*** (*Thysanolina maxima*) roots is also used. Bringing about septic condition fills the boils with pus and can be easily squeezed out.

Piles - A few people mentioned the use of ***harro*** (*Terminalia chebula*) for the treatment of piles. Since this

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method is hardly used by the people, it does not appear sensible to direct research in it.

Harro seeds are extensively as a medicine. The seed flesh is rich in tannin (mainly chebulagic acid, chebulinic acid, and corilagin). The fruit is credited with laxative, stomachic, tonic, and alterative properties.

Snake bite - People use black *bikhma* (*Aconitum spicatum* syn *bisma*) as the primary aid. Biting garlic (*Allium wallichi*) and sucking poison out of blood from the wound is a very effective first aid. Garlic and *bikhma* may be effective as an antitoxin (though not exactly like an anti-snake venom serum, ASVS). The tying of upstream part with a flexible cord is very logical as it delays the spread of toxin.

Bikhma contains five diterpene alkaloids: palmatiscine, vakognavine, vakatisine, vakatisinine, and vakatidine. It can be externally used for rheumatism and cuts or wounds (Chadha, 1976). Aconitine is easily absorbed through skin and poisoning may occur through this route simply by picking the leaves. Therefore, care must be taken in identifying the correct plant.

Worms - Aqueous extracts of firewood ash is usually used to kill worms. Many people also use lemon juice. Some people use root extracts of *siru* (*Imperata cylindrica*), *amliso* (*Thysanolina maxima*), *sallibisalli* (*Equisetum sp.*), *bhirgaule* (*Coix lachrymajobi*), and *ulte kuro* (*Achyranthes aspera*). The roots are rubbed on a stone and the aqueous dispersion are orally administered. Some people mentioned using the fruit decoction of *lapsi* (*Choerospondias axillaris*). It is known that rhizomes of *siru* contain, inter alia, appreciable amounts of dimethylsulfopropionate and potassium. Elsewhere, a *siru* extract is combined with other herbs to prepare liver cleansing medicines. It has antibacterial-, diuretic-, febrifuge-, and anthelmintic properties (Yeung, 1985; Manandhar, 2002).

Fresh wounds/Cuts - People topically apply extracts or juices of *kaali jhaar* (*Eupatorium odoratum*), *titepati* (*Artemisia indica*) and certain lichens. Some people also topically apply trichome of *dhusure* (*Colebrookea oppositifolia*). The above plants extracts obviously work as disinfectant. Some may also work as pain reliever. Some informants were found to use tender shoots of *thaade unyu* (*Thelypteris appendiculoides*) and rhizomes or leaves of *chiple* (*Pouzolzia hirta*).

Elsewhere, rhizomes of *Zingiber cassumunar* are used for curing nausea and headache. A small piece of rhizome may be chewed and swallowed or paste topically applied for the treatment of the same. The plant is believed to ward off evil spirits and repel snakes.

Muscle Sprain - Muscle sprain is treated by applying paste of *chitu* (*Plumbago zeylanica*) roots. Some people also use *aankh* (*Calotropis gigantea*) leaves. The leaves are baked on fire or under hot cinders and pressed over the sprain while still hot (the heat may sometimes become unbearable). The process is repeated for a number of times. People also said that they use *ghoda khori* (*Viburnum cylindricum*) oil and 'rifle oil' (whenever available) ~~to~~, which they rub over the sprain. This massaging relieves one of pain and speeds up healing.

Several uses of *aankh* have been mentioned in the Wealth of India (Chadha, 1976). The root bark contains α-amyrin, β-amyrin, taraxasterol, gigantin, giganteol, etc. The latex gives cardiac glycosides, calotropin, uscharin, calotoxin, colactin and uscharin. The calotropin and calotropain comlponent of the latex have anti-inflamatory and anthelmintic properties. Warmed leaves are bandaged to soothe swellings and sprains.

The traditional use of *ghoda khori* oil for rubbing against pain and backache has been mentioned by Chadha (1976) and (Widmann et al., 2003).

Rabies dog bite – The bark of the *kaphal* (*Myrica esculenta*) tree or the stinging nettle or '*sisnu'* (*Urtica dioica*) root is ground into paste and applied over the affected area. A small amount of the paste is also administered orally. Some people mentioned the use of *bikhma* (*Aconitum spicatum*) and root extracts of *kaali jhaar* (*Eupatorium odoratum*).

According to Chadha (1976), the *kaphal* bark is astringent, carminative and antiseptic. A decoction of the bark is useful in asthma, diarrhea, fever, etc. The bark is rich in tannins. The fruit part is eaten. The active components of the botanicals mentioned above have been described earlier.

Sore throat - People eat corn seeds, pumpkin seeds, and *laligurans* (*Rhododendrom arboreum*) flowers to relieve sore throat. Rhododendron has been shown to possess antiviral properties by Rajbhandari et al (2007). *Rhododendron lepidotum* flower in particular is effective against fever, cough, cold and tonsillitis. *Rhododendron arboreum* is used in the preparation of a kind of snuff. Tender leaves are stated to be used as a vegetable, and also applied to the forehead to relieve headache. Green leaves contain a glucoside called ericolin (Bhattarai et al, 2010). Eating flowers in large amounts causes intoxication. Petals can be used for the treatment of diarrhea and dysentery (Chadha, 1976).

Constipation – In the sites where we conducted our research, constipation occurs only occasionally, in which case they suck the black coatings of the *rajbrikhsa* (*Casssia fistula*) seed. Since this *rajbriksha* treatment is popular among other people also, it is difficult to say when and from where the practice began. Some people mentioned *indreni* (*Trichosanthes tricuspidata*) roots, chewed in modest amounts, are very effective against constipation. A great deal of literatures is available on *Cassia fistula*. An extensive review by Bahorun et al (2005) shows that this plant contains potent phenolic antioxidants such as anthraquinones, flavonoids and flavanol derivatives. *Rajbriksha* is used

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has purgative, antipyretic, analgesic and antibacterial properties. It is also widely used in the treatment of stomach disorder.

Rash due to allergy – The Limbu people believe in a very peculiar treatment method. '**Puwalo mala**' (a type of beaded necklace) is rubbed against the rashes, which is later pressed with '***janto***' (a hand operated attrition mill made from a pair of circular stone; used to pulverize grain seeds). Another very effective treatment is to rub ***phachyang*** (*Zingiber cassumunar*) over the affected area. This plant also supposedly wards off evil spirits.

Common cold - People drink in modest amounts the un-boiled aqueous extract of ***titepati***. This medication is also helpful in pneumonia. Some people drink a lot of heavily-seasoned, hot chicken soup to drive away the cold. It is a general belief that fried (sizzled in a small amount of oil) ***raksi*** can also relieve cold. It is also common to chew ginger rhizomes (hot, baked under cinders) to counteract the irritation in throat and relieve the coughing. Albeit less commonly ***lasun*** (*Allium wallichi)* and ***gurans*** (*Rhododendron lepidotum*) are also eaten in modest amounts to get relief from common cold.

Diarrhea - In the study sites, immature banana and guava are considered beneficial to the treatment of diarrhea. Bark extracts of ***jamuna*** (*Syzygium cumini*), ***gayo*** (*Bridelia retusa*), and ***ambak*** (*Psidium guajava*); fruit extracts of ***totala*** (*Oroxylum indicum*) and tender bud extracts of ***ainselu*** (*Rubus ellipticus*) were also mentioned as having antidiarrheal properties. Although they are familiar as home-based electrolytic treatments such as '***nun-chini-pani'*** (salt-sugar-water) and '***jivan jal'*** against dehydration, as anyone knows, these are not their discoveries. People were found to believe that an immature banana owes its medicinal property to alkaline taste. Guava is supposed to cure diarrhea because of its profuse seeds (which help harden the stool!).

The above results and discussions are based on the emic perspective. Pharmacological analysis to test the efficacy of plant-based treatments is very difficult. Pharmacological data, especially screenings for the bioactivity of phytochemicals, to determine the relative efficacies of medicinal plants appears logical but is rather involved.

The frequency at which a given illness occurs in a rural setting is rather difficult to assess because people tend to forget the episodes unless they are very important. Here, an attempt was made to determine the frequencies of the illnesses by counting the frequency of a particular word in the text. Based on this method, following results (Table 1) were obtained. The ranking of illness (1 = highest incidence, 7 = lowest incidence) in Table 1 is in general explicable. Agriculture in the hills is obviously very difficult. It involves a lot of physical work, often in jungles, among thorny bushes, and eerily steep slopes. In fact, there isn't a day without cuts and wounds. The higher incidence of fracture is justifiable for the same reason.

Other illnesses in the list relate mostly to lack of sanitation and faulty food habit. This in turn will lead to food insecurity, malnutrition and hence the vicious cycle. Improvement in the food habit and sanitation can have a significant effect in the lives of these people.

The survey data shows that some of the traditional methods of treatments have rather questionable or dubious status, the treatments used for piles, snake bite, jaundice, and rabies in particular. Incidences of diseases such as food poisoning, toothache, constipation, worms, etc., can be reduced by several simple and effective measures such as sanitation, personal hygiene, and improved eating habits.

V. Conclusions

The mountain dwelling indigenous Limbu people have identified a total 225 species of ethno-medicinal plants for the treatment of around 48 disorders in their community. The problems they often face are gastrointestinal and Cut-Wound-Burn (CWB) in their daily life. Thus, for the resolution of frequent problems, the Limbu investigated more ethno-medicinal plants in this respect, i. e. 52 species for gastrointestinal and 40 species for Cut-Wound-Burn (CWB). Limbu healers (***Phedangma***), who have special knowledge about ethno-medicine, are ethno-medicine practitioners. They also recite some words "***mantra***" during the treatment. It is considered that such treatment process is more effective. They prefer to use high altitudinal medicinal plants, namely *Aconitum spicatum* ***(Bikhma)***, *Astilbe rivularis* ***(Budho Okhati)***, *Bergenia ciliate* ***(Pakhanveda),*** *Euodia fraxinifolia* ***(Siltimur),*** *Heracleum nepalense* ***(Chimphing)***, *Nardostachys grandiflora* ***(Jatamasi)*** and *Swertia chirayita* ***(Chiraito)*** because they consider that these medicinal plants have high efficacy in treatment. The ethno-medicinal knowledge ~~in~~ of the Limbu community is gradually eroding due to western modern pharmacology, easy access of modern medicines, and general disinterest among younger generations in particular.

VI. Acknowledgements

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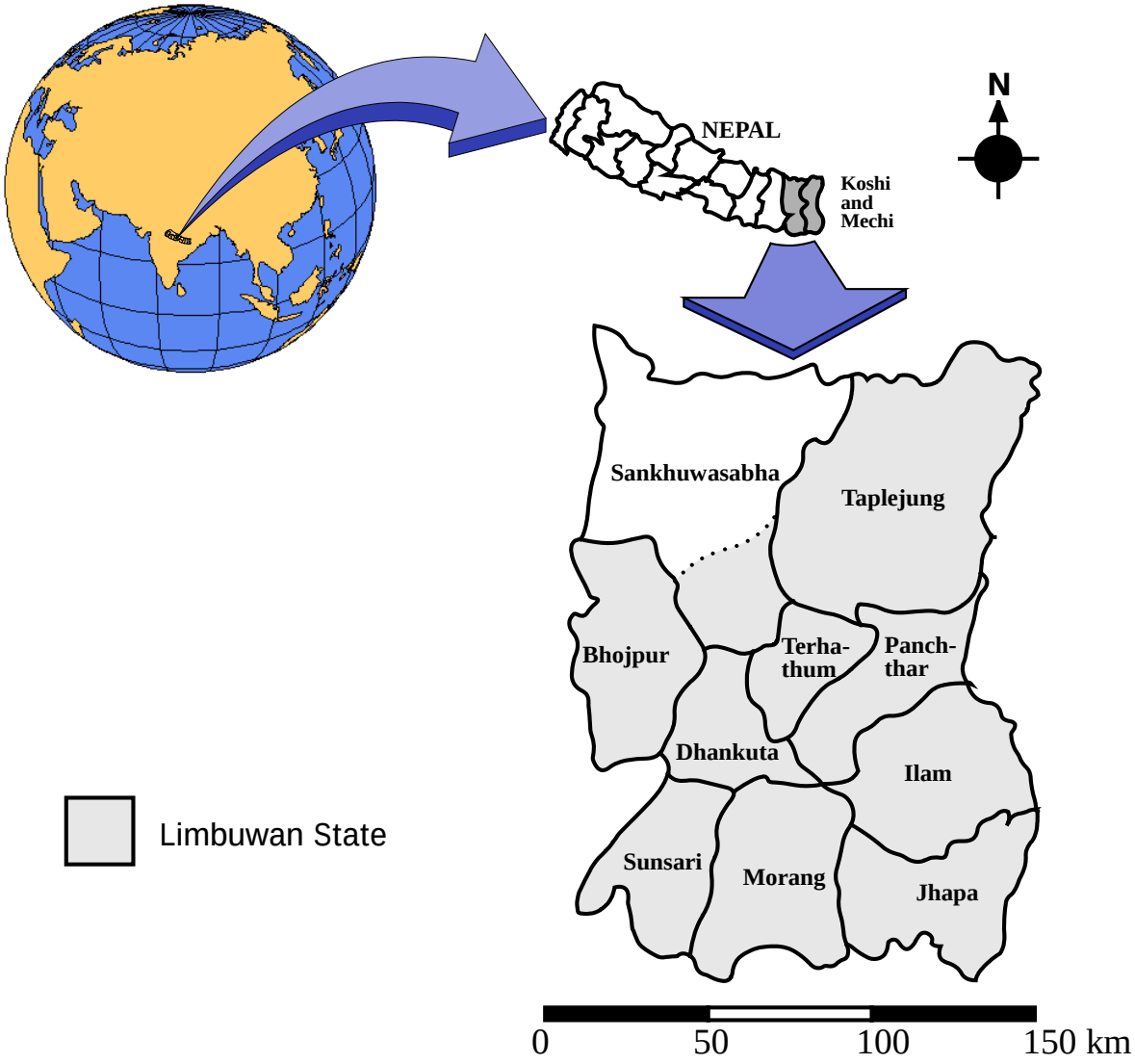


Figure 1 : Map of the study area(Limbuwan)

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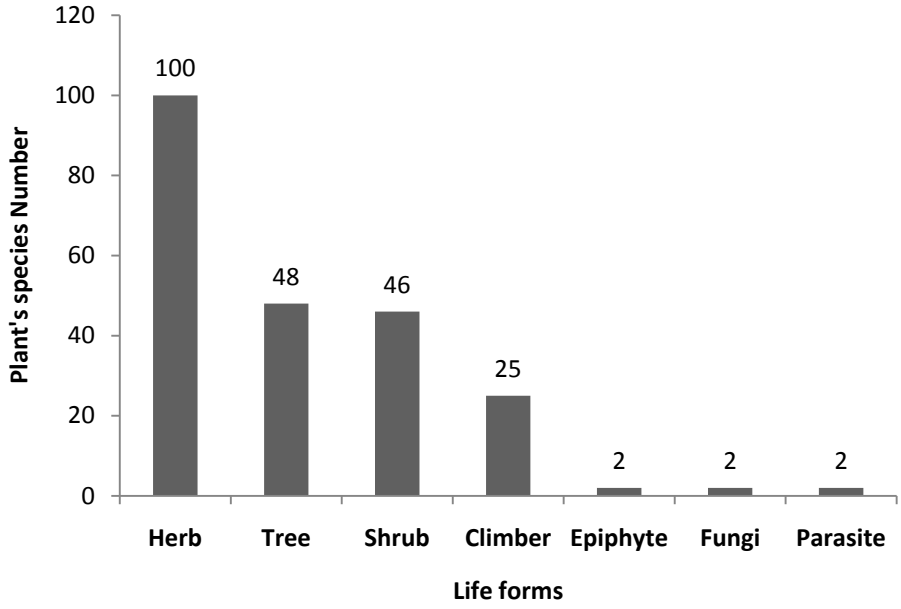


Figure 2 : Habit of Medicinal Plants

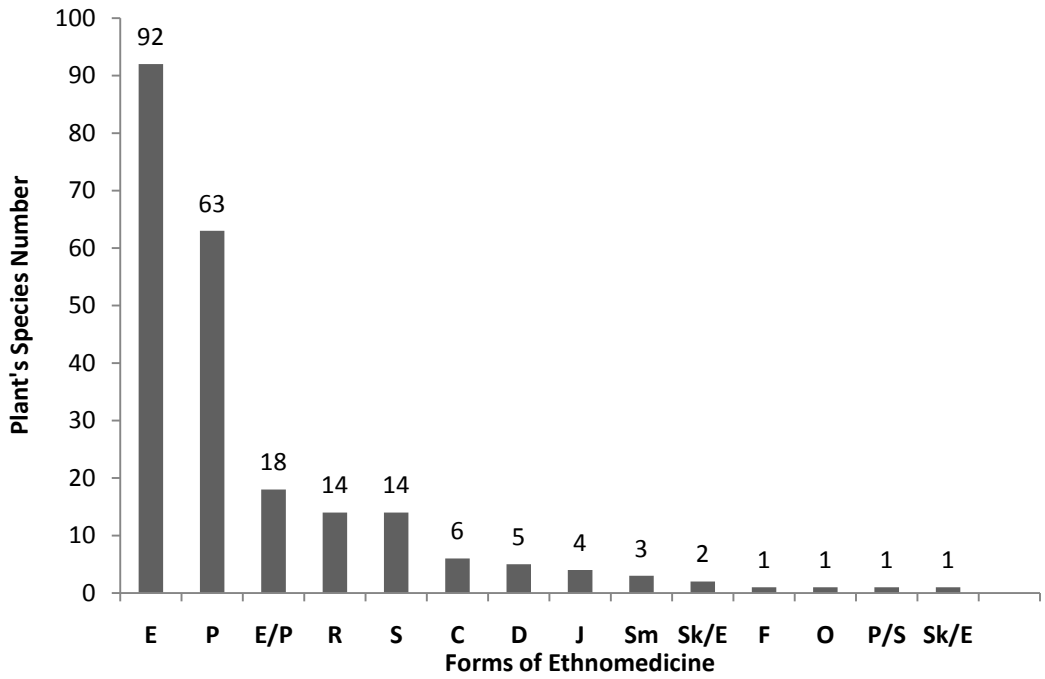


Figure 3 : Different forms of medicinal plant used; Notation, E-Extract, P-Paste, C-Chewed, S- Soup, Co-cooked, J-Juice, Sm- Smelled, F-Fried, Sk-Smoke, O-Oil

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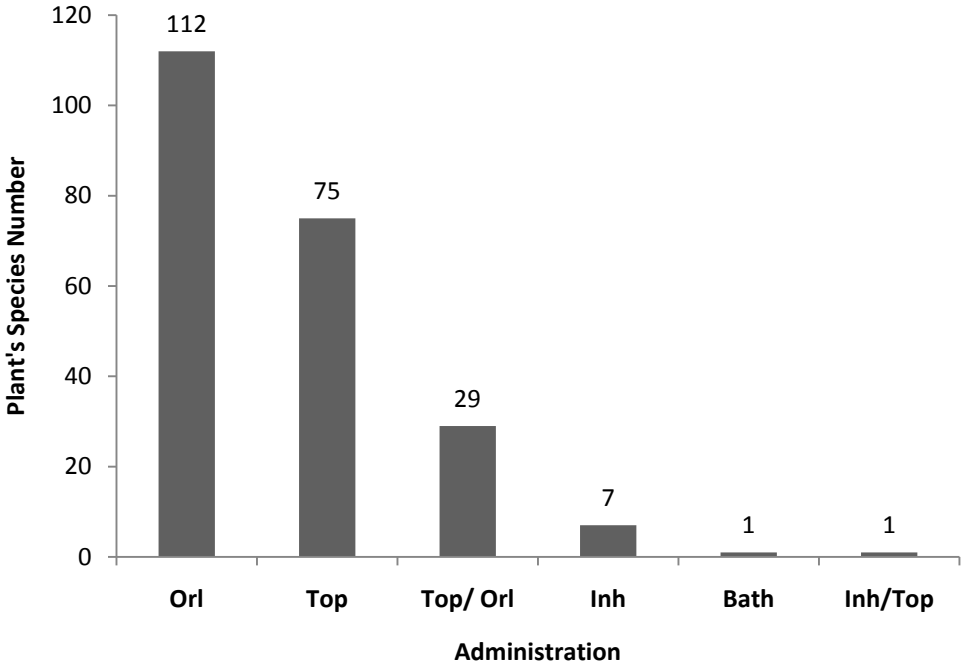


Figure 4 : Administration of ethnomedicine; Notation, Orl-Oral, Top-Topical, Inh- Inhalation

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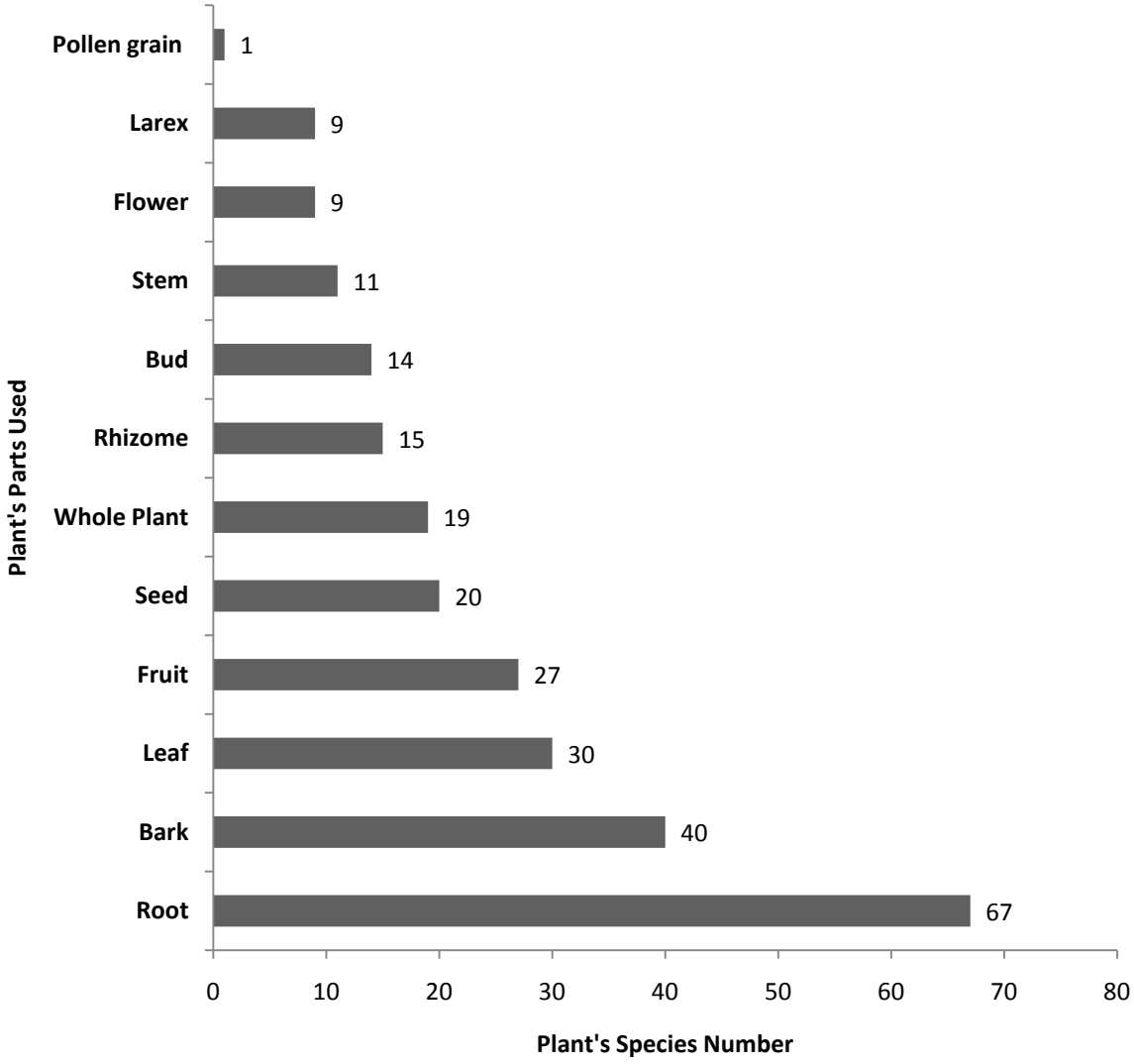


Figure 5 : Plant's parts used for ethnomedicine

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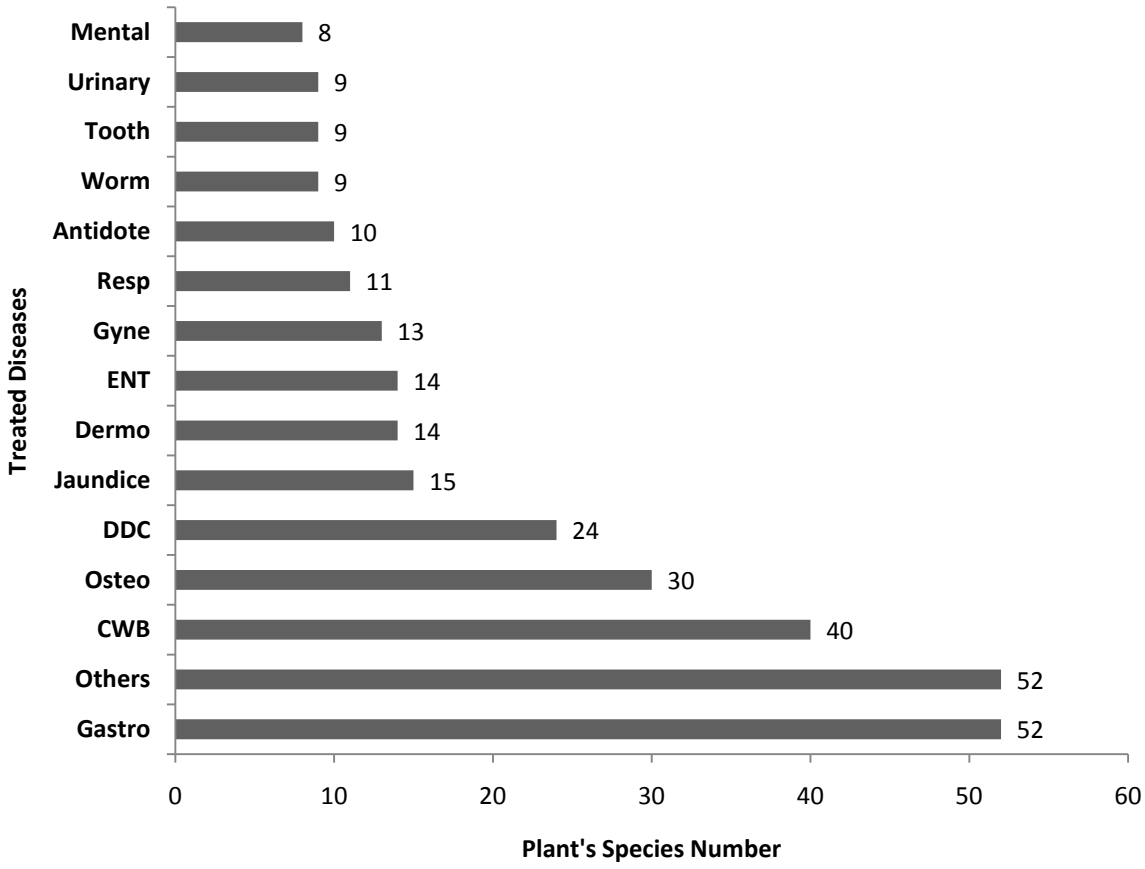


Figure 6 : Different nature of disorders treated by ethnomedicine

Notations:
Gastro =Gastritis, Laxative, Lithontripic, Piles, Stomachache
Others=Aphrodiasic, Appetizer, Body massage, Blood pressure, Flu, Diabetes, Fever, Headache, Heart diseases, Measles, Eye problem, Rabies, Rheumatism
CWB = Cut, Wound, Burn
Osteo = Dislocated joint, Fracture
DDC = Diarrhea, Dysentery, Cholera, Food poisoning
Jaundice = Jaundice
Dermo = Dandruff, Ring worm, Scabies and skin problem
ENT = Ear problem, Sinusitis, Throat sore, Tonsillitis
Gyne = Abortion, Menstruation,
Resp = Asthma, Pneumonia
Antidote = Antidote
Worm = Worm
Tooth = Tooth
Urinary = Diuretic, Hydrocele
Mental = Epilepsy, Addiction

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Table and Appendix

Table 1 : Occurrence of illness term in the text

Illness	Frequency in text	Rank
Cuts and wounds	35-40	1
Fracture	30-35	2
Diarrhea	25-30	3
Worms / helminthes	20-25	4
Piles and jaundice	15-20	5
Sinusitis, scabies, tooth ache, fever, and sore throat	10-15	6
Dysentery, sprains, dog bites, stomachache, boils/abscess, tonsillitis, snake bite, and constipation	5-10	7

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Appendix – Summary of information on traditional uses of plants of Limbu community
Notation: Adm. = Administration; O = Oral; T = Topical; B = Bath; I = Inhalation; E = Extract; P = Paste; C = Chewed; D=Dust; R=Raw; S = Soup; J = Juice; Sm = Smelled; F = Fried; Sk = Smoked; O = Oil.

Scientific name	Vernacular name	Limbu name	Family	Adm.	Part used	Form	Used as treatments
Abrus precatorius L.	Lalgedi	**Mitchhesing**	Fabaceae	O	Fruit/ Root	E	Abortion
Achyranthes aspera L.	Ulte kuro	**Aple**	Amaranthaceae	O	Root	E	Pneumonia/ Worm
Achyranthes bidentata Blume	Dattiwan	**Kandrekpa**	Amaranthaceae	O/T	Root	E/P	Pneumonia/Wound
Aconitum ferox Wall. Ex Ser.	Seto bikhma	**Wasing kuphara**	Ranunculaceae	O	Rhizome	C	Headache/Stomachache
Aconitum sp.	Phalebis	**Ning**	Ranunculaceae	O	Root	E	Asthma
Aconitum spicatum (Bruhl) Stapf	Bikhmaa	**Masing**	Ranunculaceae	T	Rhizome	P	Rabies/Stomachache
Acorus calamus L.	Bojho	**Sedakpa**	Acoraceae	B	Rhizome	E	Scabies/Sinusitis
Justicia adhatoda L.	Asuro	**Sikchakwa**	Acanthaceae	O	Root	E	Cholera/Epilepsy
Aegle marmelos (L.) Correa	Bel	**Anjamse**	Rutaceae	O	Seed	E	Ulcer
Aesandra butyracea (Roxb.) Baehni	Chiuri	**Imsewa**	Sapotaceae	T	Bark /Seed	P	Fracture/Piles
Ageratum conyzoides (L.) L.	Ilamejhar	**Isayak**	Asteraceae	T	whole plant	E	Antidote
Albizia julibrissin Durazz.	Padke siris	**Yephekpa**	Fabaceae	T	Bark	P/E	Dandruff
Allium cepa L.	Lasun	**Makkho**	Liliaceae	O	Bud	R	Blood pressure/Laxative
Allium wallichii kuntn	Ban lasun	**Sam-makkho**	Alliaceae	T	Bulb	P	Cut/Wound
Aloe vera (L.) Burm. f.	Ghiukumari	**Lupse**	Liliaceae	T	Leaf	E	Burnt
Alpinia allughas (Retz.) Roscoe	Churampha	**Challewa**	Zingiberaceae	O	Root/Rhizome	E	Diabetes/Laxative
Alstonia scholaris (L.) R. Br.	Chhatiwan	**Phakluppa**	Apocynaceae	T	Bark	E	Piles
Amaranthus spinosus L.	Lunde	**China mangra**	Amaranthaceae	O	Root	E	Diuretic
Amomum subulatum Roxb.	Alainchi	**Arengi**	Zingiberaceae	T/ O	Seed	E	Burnt/Diuretic
Anaphalis triplinervis (Sims) C. B. Clarke	Bhukiphul	**Sirogak**	Asteraceae	T	Flower	P	Skin problem

Araucaria bidwillii Hook.	Dhengresalla	**Songmang sing**	Araucariaceae	O	Bark	E	Ulcer
Arisaema flavum (Forssk.) Schott	Sarpa jibre	**Osek maki**	Araceae	O	Leaf petiole	E	Epilepsy
Artemisia indica Willd.	Titepati	**Namyoba**	Asteraceae	T/ O	Bud/Leaf/Root	E	Epistaxis/Gastric/Rheumatic
Artocarpus lakoocha Wall. Ex Roxb.	Badahar	**Muchhe**	Moraceae	T/ O	Bark/Latex	E	Diarrhea/Wound
Arundinella nepalensis Trin.	Kharuki	**Kendan**	Poaceae	T	Root	P	Wound
Asparagus racemosus Wall.	Kurilo	**Nakkhamma**	Liliaceae	O	Root	E	Gastric
Astilbe rivularis Buch.-ham. ex D. Don	Bhudo okhati	**Sawanyamden**	Saxifragaceae	O	Root	C	Cough and flu
Melia azadirachta L.	Neem	**Khajase**	Meliaceae	O	Leaf	S	Fever/Toothache
Bambusa arundinacea Willd.	Baans	**Pha**	Poaceae	O	Root	E	Jaundice
Bauhinia purpurea L.	Koiraalo	**Ajiba**	Fabaceae	O	Bark	E	Lithontripic
Bauhinia vahlii Wight & Am.	Bhorla	**Makka**	Fabaceae	O	Root	E	Menstruation problem
Benincasa hispida (Thunb.) Cogn.	Kubindo	**Phutrama**	Cucurbitaceae	O	Seed	E	Abortion
Berberis aristata DC.	Chutro	**Lakpuche**	Berberidaceae	O	Root	E	Jaundice/Menstruation problem/Piles
Bergenia ciliate (Haw.) Sternb	Pakhanbhed	**Yakpegma**	Saxifragaceae	T/ O	Root	P/E	Fracture/Throat sore/ Uterus problem
Bidens pilosa L.	Philungekuro	**Apli**	Asteraceae	T/ O	Leaf/ Root	E	Cut/Jaundice
Bischofia javanica Blume	Kaijal	**Mukumba**	Euphorbiaceae	O	Bark	E	Gastric
Bistorta amplexicaulis (D. Don) Greene	Ratnaulo	**Helloke**	Polygonaceae	T	Root	P	Antidote
Boehmeria macrophylla Hornem.	Tungejhar	**Khamturemba**	Urticaceae	T	Whole plant	P	Wound
Bombax ceiba L.	Simal	**Tengo sing**	Bombacaceae	T/ O	Bark/Latex/ Root	P/E	Dysentery/Laxative /Measles
Bridelia retusa (L.) Spreng.	Gaayo	**Yangkhek**	Euphorbiaceae	O	Bark	E	Appetiser/Diarrhea
Calotropis gigantean (L.) Dryand	Aankh	**Aak**	Asclepiadaceae	T	Young Leaf	P	Dislocated joint

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Cannabis sativa L.	Ganja	**Pijyama**	Cannabaceae	O	Leaf	E	Laxative
Capsicum annuum L.	Khorsani	**Machchi**	Solanaceae	T	Fruit	P	Antidote
Carica papaya L.	Mewa	**Phanse**	Caricaceae	O	Fruit	R	Jaundice
Caryota urens L.	Ban supari	**Tambhung Umse**	Arecaceae	O	Fruit	R	Appetiser
Cassia fistula L.	Raajbrikchha	**Samsiring**	Fabaceae	O	Fruit/Seed	R	Diuretic/Laxative
Castanopsis tribuloides (Sm.) A. DC.	Katus	**Sigap**	Fagaceae	T	Bud	P	Scabies
Centella asiatica (L.) Urb.	Ghodtaapre	**Sidasakchi**	Apiaceae	O	whole plant	E	Stomachache/Ulcer
Cheilenthes sp.	Ranikanda	**Hangmsingjek**	Pteridaceae	T	Root	P	Cut
Chenopodium album L.	Bethu	**Sinang**	Chenopodiaceae	O	Seed	Co	Gastric
Choerospondias axillaris (Roxb.) B. L. Burtt & A. W. Hill	Lapsi	**Imbuwa**	Anacardiaceae	O	Fruit	S	Worm
Cinnamomum tamala (Buch.-Ham.) Nees & Eberm.	Dalchini	**Limsap**	Lauraceae	O	Bark	S	Common flu
Cirsium verutum (D.Don) Spreng.	Sungurkaande	**Chingyakma**	Asteraceae	T/ O	Bud/Root	P/E	Antidote/Diuretic
Citrus aurantifolia (Christ.) Swingle	Kagati	**Larimba**	Rutaceae	O	Root	E	Worm
Citrus junos Tanaka.	Kali jyamir	**Sarang**	Rutaceae	O	Fruit	J	Rabies
Citrus medica L.	Bimira	**Saippa**	Rutaceae	O	Fruit's Bark	R	Worm
Clematis buchananiana DC.	Chunsi	**Pipipa**	Cucurbitaceae	O	Root	E	Sinusitis/Stomachache
Coccinia grandis (L.) Voigt.	Ban kakra	**Suwa paet**	Cucurbitaceae	O	Root	E	Piles
Coelogyne fuscescens Lindl.	Sunkhari	**Singjango**	Orchidaceae	T	Rhizome	P	Fracture
Coix lachryma-jobi L.	Bhirgaule	**Phinjiri**	Poaceae	O	Root	E	Placenta discharge/Worm
Colebrookea oppositifolia Sm.	Dhusure	**Lajesing**	Lamiaceae	T	Bud	E	Ophthalmic problem
Cordycep sinensis (Berk.) Sacc.	Yarsagumba	**Yarsagumba**	Clavicipitaceae	O	Whole plant	E	Aphrodiasic
Costus speciosus (Koenig) Sm.	Betlauri	**Worektembo**	Cucurbitaceae	O	Stem	E	Cholera/Diabetes/
Cucumis sativus L.	Kakra	**Paait**	Cucurbitaceae	O	Seed	E	Laxative

Cucurbita pepo L.	Pharsi	**Yakko**	Cucurbitaceae	O	Seed	F	Diuretic
Curcuma angustifolia Roxb.	Besar	**Harandi**	Zingiberaceae	O	Rhizome	P	Common flu
Curcuma longa L.	Kalobesar	**Kumakla harandi**	Zingiberaceae	O	Rhizome	E	Piles
Cuscuta reflexa Roxb.	Amarlataa	**Chimchimpona**	Convolvulaceae	O	Whole plant	E	Jaundice
Cynodon dactylon (L.) Pers.	Dubo	**Sambok**	Poaceae	T/ O	Root	P	Antidote/Diabetes
Cyperus rotundus L.	Mothe	**Mo**	Cyperaceae	O	Rhizome	E	Sinusitis/Ulcer
Dactylorhiza hatagirea (D. Don) Soo	Paanch aunle	**Tigem**	Orchidaceae	T/ O	Rhizome	P/E	Aphrodiasic/Cut/Epilepsy
Datura metel L.	Kalo dhaturo	**Alando**	Solanaceae	T	Leaf/ Seed	E/P	Dislocated joint/Rabies
Datura suaveolens Humb. & Bonpl. Ex Willd.	Dhokrephul	**Wagowa**	Solanaceae	O	Root	E	Laxative/Placenta discharge
Dichrocephala integrifolia L.f.) Kuntze	Hachheu jhar	-	Asteraceae	T	Whole plant	P	Antidote
Didymocarpus villosus D. Don.	Kumkum	**Sange**	Gesneriaceae	I	Leaf	Sm	Laxative
Dioscorea bulbifera L.	Ban tarul	**Tamphung khe**	Dioscoreaceae	T	Stem	P	Piles
Dioscorea deltoidea Wall. Ex Griseb.	Bhyaakur/Gittha	**Sukhe**	Dioscoreaceae	T	Root	P	Wound
Dolichos biflorus L.	Gahat	**Phekluse**	Fabaceae	O	Seed	S	Lithontripic/Measles
Lablab purpureus (L.) Sweet.	Tate simi	**Khesekpa**	Fabaceae	O	Root	E	Abortion/Epilepsy
Drymaria cordata (L.) Willd. ex Schult.	Abhijaalo	**Wana**	Caryophyllaceae	T	Whole plant	P	Antidote/Pneumonia,
Elaeagnus parvifolia Wall. ex Royle	Guelo	**Kharmakpa**	Elaeagnaceae	O	Bark	E	Diarrhea
Engelhardia spicata Lechen ex Blume	Mahuwa	**Yakpapma**	Juglandaceae	T	Bark	P	Fracture
Entada phaseoloides (L.) Merr.	Paangraa	**Neghek**	Fabaceae	T	Fruit	P	Fracture
Equisetum arvense L.	Sallibisalli	**Hondok**	Equisetaceae	O	Root	E	Diuretic/Worm
Erythrina stricta Roxb.	Phaledo	**Manglok**	Fabaceae	O	Stem	R	Toothache
Eulaliopsis binata (Retz.) C.E.Hubb.	Babiyo	**Igekling**	Poaceae	T	whole plant	D	Skin allergy
Euodia fraxinifolia (D. Don) Hook. f.	Khanakpa	**Khanakpa**	Rutaceae	O	Fruit	E	Cholera/Food poison,

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Eupatorium adenophorum Spreng.	Kaali jhaar	**Makyamma**	Asteraceae	T	Leaf/Root	E	Cut/Sinusitis
Eupatorium sp.	Mikchiriphung	**Mikchiriphung**	Asteraceae	O	Root	E	Placenta discharging
Euphorbia royleana Boiss.	Kandesiudi	**Lungdinwa**	Euphorbiaceae	O	Latex	R	Appetiser
Fagopyrum esculentum Moench.	Titephapar	**Kyabo**	Polygonaceae	O	Young plant	S	Heart disease
Ficus benghalensis L.	Bar	**Labhaksing**	Moraceae	O	Root	P	Gastric
Ficus lacor Bunch-Ham.	Kabra	**Khaitrang**	Moraceae	T	Latex	R	Wound
Ficus religiosa L.	Pipal	**Namsusing**	Moraceae	T/ O	Bark/Leaf	E/P	Dysentery/Wound
Ficus semicordata Buch.-Ham. ex Sm.	Khanyu	**Khagse**	Moraceae	T	Bud/ Latex	E	Pneumonia/Wound
Fraxinus floribunda Wall.	Lakuri	**Pidjuma**	Moraceae	T	Bark	P	Fracture
Fuchsia hybrid Hort. Ex Siebold & Voss	Ghanti phul	**Kingna phung**	Onagraceae	O	flower/Leaf	E	Diabetes
Girardinia diversifolia (Link) Friis	Allo	**Maayu sikwa**	Urticaceae	O	Bark	E	Stomachache
Glycine max (L.) Merr.	Bhatamas	**Chembi**	Fabaceae	T	Seed	P	Antidote
Gmelina arborea Roxb.	Khamari	**Hangesing**	Verbenaceae	O	Bark	E	Jaundice
Gossypium arboretum L.	Kapas	**Khinambo**	Malvaceae	T	Seed	P	Scabies
Graphis sp.	Jhyau	**Lungasekpa**	Graphidaceae	T	whole plant	P	Cut
Hemiphragma heterophyllum Wall.	Nasejhar	**Parubanegho**	Scrophulariaceae	I	Pollen grain	Sm	Sinusitis
Heracleum nepalense D. Don	Chimphing	**Chimphing**	Apiaceae	O	Fruit	E	Cholera/Food poison,
Hibiscus sabdariffa L.	Benchanda	**Sutsutte**	Malvaceae	O	Flower	S	Dysentery/Gastric,
Hodgsonia macrocarpa (Blume) Cogn	Ban pharsi	**Tambhungyakko**	Cucurbitaceae	T	Root	D	Cut
Holarrhena antidysenterica (Roxb. Ex Fleming) Wall. Ex A. DC.	Indrajal	**Karingo**	Apocynaceae	O	Bark	S	Rheumatic
Holarrhena pubescens (Buch-Ham)	Khirlo (Aule)	**Yengoba**	Euphorbiaceae	O	Bark	E	Gastric/ Piles
Homalium napaulense (DC.) Benth.	Phalame	**Phenjelangma**	Flacourtiaceae	T	Bark	P	Fracture
Imperata cylindrical (L.) P. Beauv.	Siru	**Ning**	Poaceae	T/ O	Root	E	Antidote/Worm
Ipomoea hederifolia L.	Lahare siudi	**Iwalungdinba**	Convolvulaceae	T	Fruit	P	Dandruff

Jasminum arborescens Roxb.	Chameli	**Chophung**	Oleaceae	O	Bud	E	Pneumonia
Jasminum humile L.	Jai	**Komena phung**	Oleaceae	O	Leaf	E	Pneumonia
Jatropha curcas L.	Kadam (Saruwa)	**Ranikhel**	Euphorbiaceae	O	Latex	R	Toothache
Juglans regia L.	Okhar	**Khesik(Khause)**	Juglandaceae	O	Fruit	R	Laxative
Juniperus recurva Buch-Ham. Ex D. Don	Bhairungpaati	**Sange**	Cupressaceae	I	Leaf/Stem	Sk	Headache/ Stomachache
Lantana camara L.	Kirne kaandaa	**Namsuphung**	Verbenaceae	T	Seed	P	Piles
Lepidium sativum L.	Chamsur	**Sipha**	Brassicaceae	T	Whole plant	P	Fracture
Leucas cephalotes (Roth.) Spreng.	Dronapuspa	**Tongphung**	Lamiaceae	O	Leaf	S	Menstruation problem
Lindera neesiana (Wall. Ex Nees) Kurz.	Siltimur	**Warekpa**	Lauraceae	T	Fruit	P	Scabies
Lobelia pyramidalis Wall.	Aklebir	-	Campanulaceae	O	Stem	E	Laxative
Lycopersicon esculentum Mill.	Golbheda	**Laphenda**	Solanaceae	T	Bud	E	Wound
Lygodium sp.	Lahare unyu	**Kattekwa**	Schizaeaceae	T	Leaf	E	Wound
Lyonia ovalifolia (Wall.) Drude	Angeri	**Tabea**	Ericaceae	T	Bud	P	Scabies
Maesa chisia Buch-Ham. Ex D. Don	Bilaune	**Yangjengwa**	Myrsinaceae	O	Bud	E	Epilepsy
Maesa macrophylla (Wall.) A. DC.	Bhogate	**Ammrakakma**	Myrsinaceae	O	Fruit	S	Diarrhea/Jaundice,
Mangifera indica L.	Aap	**Aabe**	Anacardiaceae	T/ O	Bark/Latex/ Root	P/E	Dislocated joint/Jaundice/Piles
Mangifera sylvatica Roxb. Ex Wall	Ban aap	**Lekse**	Anacardiaceae	O	Bark	E	Gastric
Melia azedarach L.	Bakaina	**Thumrangse**	Meliaceae	T/ O	Bark/Fruit/ Leaf	P	Scabies/Toothache
Mentha arvensis L.	Padina/Pudina	**Padena**	Lamiaceae	T/ O	whole plant	P/E	Cut/Common flu
Mesua ferrea L.	Naageswari	**Anjamse**	Clusiaceae	T/ O	Bark/Stem	P	Hydrocele/Wound
Mimosa pudica L.	Lajjawati	**Ikphura**	Fabaceae	T/ O	Bark/ Root	P/E	Menstruation problem/Wound
Oroxylum indicum (L.) Kurz	Totala	**Nepphe**	Bignoniaceae	O	Leaf	C	Toothache

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Osbeckia nepalensis Hook.	Angeri (khane)	**Mendamakla**	Melastomataceae	O	Bark/Flower/Fru	Eit	Diarrhea/Gastric Jaundice/Lithontripic
Oxalis latifolia Humb.	Chari amilo	**Sukroti**	Oxalidaceae	T/ O	Whole plant	P/E	Ophthalmic problem/Rabies
Oxyspora paniculata (D. Don) DC.	Gaitihare	**Saktundunna**	Melastomataceae	O	Root	E	Stomachache
Perilla frutescens (L.) Britton.	Silam	**Nambhang**	Lamiaceae	O	Seed	R	Measles
Vigna radiate (L.) R. Wilczek	Munga dal	**Sakcha**	Fabaceae	T	Seed	P	Fracture
Phyllanthus emblica L.	Amalaa	**Angwara**	Euphorbiaceae	O	Bark/ Fruit	E	Diarrhea/Laxative,
Phytolacca acinosa Roxb.	Jaringo	**Yaktewa**	Phytolaccaceae	O	Whole plant	E	Gastric
Pieris Formosa (Wall.) D. Don	Balu	**Kekphel**	Ericaceae	I	Root	D	Rheumatic
Pinus roxburghii Sarg.	Rani salla	**Aang**	Pinaceae	T	Latex/Leaf	R	Fracture/Hydrocele
Piper chaba Hunter	Chaabo	**Chabo**	Piperaceae	T	Root	P	Wound
Plumbago zeylanica L.	Chitu	**Chitu**	Plumbaginaceae	T/ O	Root	P/E	Appetiser/Dislocated joint
Polygala abyssinica R. Br. ex Fresen.	Gahate jhaar	**Pheksukse yan**	Polygalaceae	O	whole plant	E	Dysentery
Polygonum affine D. Don	Thotne	**Sampyu**	Polygonaceae	T/ O	Root	P/E	Abortion/Cut
Pouzolzia hirta (Blume) Hassk.	Saano chiple	**Tuiremba**	Urticaceae	T	Root	P	Fracture
Prunus cerasoides D. Don	Paiyun	**Umphung**	Rosaceae	T	Bark	P	Fracture
Prunus persica (L.) Batsch.	Aaru	**Khamrek**	Rosaceae	T	Tender Bud	P	Wound
Psidium guajava L.	Ambak	**Lupse**	Myrtaceae	O	Root's Bark	P	Laxative/Toothache
Punica granatum L.	Daarim	**Lalimse**	Punicaceae	T/ O	Fruit/ Root	E	Laxative/ Rabies
Pyracantha crenulata (D. Don) M. Roem.	Ghaanghaaru		Rosaceae	O	Root	P	Burnt
Pyrus pashia Buch-Ham, ex D. Don	Mehel	**Thambenchhe**	Rosaceae	T	Fruit	S	Dysentery
Quercus glauca Thunb.	Phalat	**Yahi**	Fagaceae	T	Bark	P	Fracture
Raphanus sativus L.	Mula	**Labhak**	Brassicaceae	T	Seed	P	Ring Worm

Rauvolfia serpentine (L.) Benth. Ex Kurz.	Sarpagandha	**Aaseksin**	Apocynaceae	O	Root	C	Diabetes
Rheum emodiaustrale D. Don	Padamchal	**Padamchal**	polygonaceae	T/ O	Root	P/E	Abortion/Cut
Rhododendron anthopogon D. Don	Sunpati	**Mudensukpa**	Ericaceae	I	Leaf	Sk	Tobacco addiction
Rhododendron arboretum Sm.	Guraans/Laligura ns	**Thokpet**	Ericaceae	O	Bark/flower	E	Jaundice/Choking fish bone
Rhododendron grande Wight.	Patlingo	**Thokpet**	Ericaceae	O	Bark	E	Jaundice
Rhus parviflora Roxb.	Satibayar	**Iksewa**	Anacardiaceae	O	Bark	E	Gastric
Ricinus communis L.	Aderi	**Khungnama**	Euphorbiaceae	T	Root	E	Fracture
Rosa brunonii Lindl.	Bhaise kanda	**Sangwatingrek**	Rosaceae	T	Root	P	Dislocated joint
Rosa indica L.	Gulab	**Lojiphung**	Rosaceae	T	Flower	E	Ear problem
Rubus ellipticus Sm.	Ainselu	**Tingrek**	Rosaceae	O	Root/Tender Bud	E	Diarrhea/Dysentery
Rubus nepalensis (Hook. f.) Kuntze	Bhuin ainselu	**Kakwa tingrek**	Rosaceae	T/ O	Leaf/Root	P	Stomachache/Wound
Rumex nepalensis Spreng.	Halhale	**Tangsanglabo**	Ranunculaceae	T	Root	P	Ring Worm
Saccharum officinarum L.	Ukhu	**Sot**	Poaceae	O	Stem	J	Jaundice
Salvia hians Royle ex Benth.	Mirlejhar	-	Lamiaceae	T	Whole plant	P	Scabies
Sapindus mukorossi Gaerth.	Ritthaa	**Phimbrikwa**	Sapindaceae	T	Fruit's Bark	P	Dandruff
Schima wallichii (DC.) Korth.	Chilaaune	**Yangsingba**	Theaceae	T/ O	Bark/ Fruit	P	Antidote/Jaundice
Scoparia dulcis L.	Kharete jhar	-	Scrophulariaceae	O	Whole plant	E	Jaundice/Menstruation problem
Scurrula elata (Edgew.) Danser.	Aijheru	**Singdhaba**	Loranthaceae	T	Bark	P	Fracture
Selinum wallichianum (DC.) Raizada & Saxena	Bhutkesh	**Lechhm sing**	Apiaceae	I	Flower/Leaf	Sm	Headache
Sesamum indicum L.	Til	**Thang**	Lamiaceae	T	Seed	P	Measles
Shorea robusta Gaerth	Saal	**Sasing**	Dipterocarpaceae	T	Bark	P	Fracture/Wound
Sida cordata (Burn. f.) Borss. Waalk.	Lwangaphul	**Yerepmit**	Malvaceae	T	Leaf	P	Cut
Solanum torvum Sw.	Bihi	**Chikhuma**	Solanaceae	O	Fruit/Stem	E	Diabetes/Piles
Spilanthes acmella (L.) Murr.	Pire jhaar	**Chasuk**	Asteraceae	O	Leaf/Stem	C	Toothache

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Swertia chirayita (Roxb. Ex Fleming)	Chiraito	**Sunghinba**	Gentianaceae	O	Whole plant	E	Fever
Swertia multicaulis D. Don	Sarmaguru	-	Gentianaceae	T/ O	Root	P	Cut/Ulcer
Syzygium cumini (L.) Skeels	Jamuna	**Chambho**	Myrtaceae	T/ O	Bark/Fruit/ Root	P/E	Diarrhea/Diabetes/ Fracture
Tagetes patula L.	Sayapatriphul	**Thopaphung**	Asteraceae	O	Flower	E	Pneumonia/Throat sore
Taxus wallichiana Zucc.	Lotha salla		Taxaceae	T	Bark	E	Epilepsy
Tectaria macrodonta (Fee) C. Chr.	Kaalo unyu	**Kumakla katekwa**	Dryopteridaceae	O	Rhizome	C	Toothache
Terminalia bellirica (Gaertn) Roxb.	Barro	**Barra**	Combretaceae	O	Fruit	J	Throat sore
Terminalia chebula Retz.	Harro	**Hangam**	Combretaceae	O	Fruit	J	Piles/Throat sore
Thelypteris appendiculoides Fraser-Jenk.	Thaade unyu	**Katekwa**	Thelypteridaceae	T	Bud	E	Cut/Scabies
Thysanolaena maxima (Roxb.) Kuntze.	Amliso	**Sealo**	Poaceae	O	Root	E	Pneumonia/Worm
Tinospora cordifolia (Willd.) Hook. f. & Thoms.	Gujargaano	**Kengban**	Menispermaceae	O	Rhizome	E/P	Menstruation problem/Piles
Tinospora sp.	Raato Gujurgaano	**Heraba Kengban**	Menispermaceae	T	Rhizome	P	Fracture
Trichosanthes cucumerina L.	Ban Ghiraula	**Tambhung Toryan**	Cucurbitaceae	O	Fruit	E	Jaundice/Sinusitis
Trichosanthes tricuspidata Lour.	Indreni	**Saya**	Cucurbitaceae	O	Root	E	Diuretic
Ulmus lanceifolia Roxb. Ex Wall.	Chamlayo	**Tumsing**	Ulmaceae	T	Bark	P	Fracture
Urena lobata L.	Bhedekuro	**Akkephung**	Malvaceae	T/ O	Root/Seed	E	Toothache/Wound
Urtica dioica L.	Sisnu	**Sikwa**	Urticaceae	T/ O	Leaf/Root	P/S	Blood pressure/ Rabies
Valeriana jatamansii Jones	Sugandhawal	**Panwakphung**	Valerianaceae	O	Leaf/Root	E	Diarrhea/Epilepsy
Viburnum cotinifolium D. Don	Baklo pate	**Manggena**	Sambucaceae	T	Leaf	P	Cut
Viburnum cylindricum Buch-ham. ex D. Don	Ghodakhori	**Hangangse**	Sambucaceae	T	Fruit	O	Body massage
Viburnum mullaha Buch-ham. ex D. Don	Kabase	**Hangphewa:sing**	Sambucaceae	T	Root	P	Fracture

Viola sp.	Dudhe lahara	**Pitnu Iwat**	Violaceae	O	Fruit	E	Pneumonia
Viscum album L.	Hadchud	**Khewalangba**	Loranthaceae	T	Whole plant	P	Fracture
Vitex negundo L.	Simali	**Tekesing**	Verbenaceae	I/T	Bark/Bud/Leaf	Sk/E	Dislocated joint/Piles/ Sinusitis
Woodfordia fruticosa (L.) Kurz.	Dhaenro	**Pangwari**	Lythraceae	T/ O	Bark/Flower	E/P	Burnt/Dysentery
Xeromphis spinosa (Thunb.) Keay.	Maidal kanda	**Lungdingba**	Rubiaceae	T	Latex	R	Wound
Zanthoxylum armatum DC.	Timur	**Meadhing**	Rutaceae	O	Fruit	S	Cholera/Gastric
Zingiber cassumunar Roxb.	Phachyang	**Kherabe**	Zingiberaceae	O	Rhizome	S	Stomachache
Zingiber officinale Rosc.	Aduwaa	**Haabek**	Zingiberaceae	O	Rhizome	S	Cold flu
Zizyphus mauritiana Lam.	Bayar	**Tingsingba**	Rhamnaceae	T	Fruit	R	Measles

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