

Ethnomedicinal Plants of Kanchanrup Municipality Saptari, Nepal

Vijay Kumar Chaudhary^{1*}, Suman S. Bhattarai² & Binod Gautam¹

¹Central Department of Botany, Kirtipur, Kathmandu, Nepal

²Department of Botany, Trichandra Campus, Jamal, Kathmandu, Nepal

*E-mail: vttharu143@gmail.com

Abstract

The study was carried out in Kanchanrup Municipality-06, Saptari district. The exploration of ethnomedicinal plant and their traditional knowledge practices by local people of the study area. The knowledge is far beyond any modern medicinal practice. The study area is very rich in plant diversity including medicinal plants. The plants are used by local people as different remedies are only viable in the study area. The study area was surveyed from 21 April to 13 June 2016 to collect medicinal plants and information on traditional medicinal practices by interviewing with local healers, Dhami, Jhakari, and some knowledgeable old persons who have been experiencing the particular use for the treatment of the diseases. The survey depended on semi-structured questionnaires in the local language. A total of 40 household surveys were done in the study area. All total 118 plants species were identified of 93 genera and 62 families. Among these, 48 herbs, 24 shrubs, 32 trees, and 14 climbers species were documented which are used for medicinal purpose. A total of 50 types of health problems were found, which was cured by using local plants. The common health problems were sexual disorder, cough and cold, diarrhea & dysentery, gastric, skin diseases, cuts and wounds.

Keywords: Dhami, Jhakari, Local people, Traditional knowledge.

Introduction

The term ethnobotany was first coined by Harshberger, who defined it as the study of plants used by primitive and aboriginal people (Harshberger, 1896). Ethnobotany is the relationship between people and plants in their surrounding area. This is common in Himalayan Terai region where an enormous wealth of medicinally important plant species commonly used in the society (Bajpai et al., 2016). Plant and plant products form an integral part of our life and it is extremely difficult to imagine the survival of humans without them. Traditional medicine is widespread throughout the world (WHO, 2002). Recently 88% of the global population turns to plants derived medicine as their first line of defense for maintaining health and combating diseases (Mahato & Sharma, 2015). In fact, the traditional beliefs to the varied uses of plants are deeply rooted in Nepalese culture (Bhattarai, 2018). Many plants have significance in terms of medicine (Mahato & Sharma, 2015).

The traditional knowledge of local people has high ethnobotanical importance due to cultural values and faith in indigenous knowledge. Indigenous

knowledge is such a type of firsthand idea and practices refined from selected knowledge through thousands of years or even more (Karna, 1997; Magar & Neupane, 2016). The rural people of Nepal continue to depend on the local therapy for their health care as it is cheap, convenient, and freely available (Manandhar, 2002; Baral & Kurmi, 2006). It is interesting that whatever we have been entered in the 21st century, 80% of villages' residence people's health problem is tackled by using herbal medicine prescribed by Vaidhya or traditional medicinal person or from guided by older people prescriptions. The ethnobotanical research acts as a bridge between traditional knowledge in medicinal plants.

Many traditional systems of medicine are now being gradually documented in Nepal. It has been estimated that various communities in Nepal use approximately 1000 species of wild plants in traditional medicinal practice (Chaudhary, 1998). According to Baral and Kurmi (2006) and Rokaya et al. (2010), 1792 to 2331 medicinal and aromatic plants in Nepal (Kunwar et al., 2013). These are particularly based on true folk and ethnomedicines purpose (Kurmi & Baral, 2004), which pass from one

generation to another simply by verbal arguments. The WHO has been also estimated that about 80% of the populations in developing countries depend on traditional medicine for their primary health care needs. Many such plants also have other domestic uses.

The traditional use of plants collected through ethnobotanical research plays an important role in the practical aspect of traditional medicine. It is particularly important that studies in ethnobotany and ethnopharmacology continue to preserve traditional knowledge (Kurmi & Baral 2004). The aim of this study was documentations and identification of the ethnomedicinal plants and their local uses by the tribal people of the study area. The reason behind that study was various parts of the country; the ethnobotanical works have been well documented by the Governmental and Non-Governmental organizations like Universities, researchers, NGO, INGO, etc in different indigenous communities. Despite such studies, the research related to the use of medicinal plants in Kanchanrup Municipality, Saptari district is still lacking. The study was one such attempt, it documented traditional knowledge on the use of plants for curing various ailments by the residents of Kanchanrup Municipality, Saptari district. The information accumulated here will be of use to the readers, and related researchers in the future.

Materials and Methods

Study area

Saptari district is located in the Sagarmatha zone in the Province no. 2. The total area of this district is 1,359.28 Sq.km. The study area Kanchanrup Municipality-06, Saptari district, Nepal was shown in Figure 1. In this district, the altitude varies from 64 - 457 m asl (above sea level). The temperature varies from 7 to 40°C and the average rainfall is 1,336 mm to 1,835 mm. It is situated between 26°41' to 26°39' N latitude and 86°56' to 86°57' E longitude. The study area is frequently dominated by the Tharu community i.e. about 80% population of people belongs to the cast and the rest are followed by

Mushar, Batar (Sardar), Malah (Mukhiya), Muslim, Thakur, Horizon (Ram), Newar, Brahmin, Chhetri, etc. Most of the elderly people are illiterate and no one has a higher education degree. Agriculture is the major occupation. However, agricultural products are not enough to meet their basic food need for the whole year.

The herbarium made from the collected plants has been deposited at the Department of Botany Tri-Chandra Multiple Campus, Ghantaghar, Kathmandu.

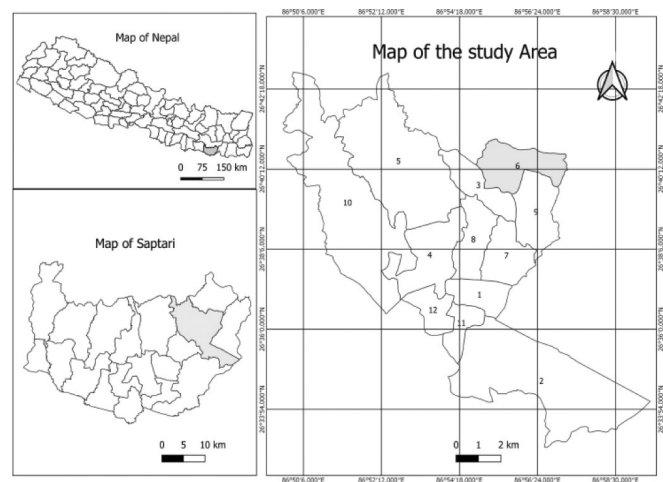


Figure 1: Map of Kanchanrup Municipality showing study area

Field Visit and Data Collections

The area was surveyed frequently during the study period from 2016 to 2017. In each visit, the local healers (Dhami, Jhakari, and Vaidya) or elderly people who knew medicinal plants were requested for the information about the utilization, mode of preparation of the drug, parts used the form of medicines through a semi-structured questionnaire in the local language. Sampled herbs, climbers, twigs, shrubs, and trees were identified in the field with the help of locals and available knowledge-based of local informants.

The plants were collected in their flowering and fruiting stage as far as possible from the natural habitat with the help of local healers for herbarium preparation. The plant specimens were pressed, through locally available instruments and materials with the guidance of the respective lecturer and professor of the Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.

The plant specimens were identified with the help of standard literature, journals, and reports accessed from the central library of Tribhuvan University (TU), and the Department of Plant Resources, Government of Nepal. Similarly, the plant specimens that were collected and preserved were crosschecked with the herbarium of National Herbarium (KATH), Tribhuvan University Central Herbarium (TUCH), Central Department of Botany, and taxonomic expert. Plants with their respective uses, parts used, mode of drug preparation, the life form of plants, family, local name have been listed in Table 1.

Commonly used forms of medication:

The form of medication was followed as mentioned by Mahato and Sharma (2015).

- Decoction: It is prepared by boiling the plant parts in water to extract the drug in liquid.
- Infusion: It is prepared by soaking the plant's parts in water overnight or for some hours.
- Paste: The fresh plant parts are ground in water by stone mortar and pestle.
- Juice: It is obtained by squeezing the plant parts between hands or crushing the plant parts with a stone mortar and pestle and the obtained juice is filtered through a clean cloth.
- Liquid drug: The plant parts are crushed squeezed and the required amount of water is added to dilute them.
- Powder: It is prepared by crushing the dried plant parts with stone mortar and pestle

Results and Discussion

A total of 118 plant species were recorded as medicinal values in the Kanchanrup Municipality - 06. The plants were written with their local name, Botanical name, uses & their mode of application in the form of medicine for curing & preventing various types of diseases that are far from any modern medicine system available (Table 1). Based on the habit of the used medicinal plants, several herbs were highly (48 spp.) used followed by the tree (32 spp.), shrub (24 spp.), and climber (14 spp.) Figure 2. A similar result of medicinal plant habit was recorded from several authors (Pande, 2013; Bhattarai &

Acharya 2015; Magar & Neupane, 2016; Tamang et al., 2017).

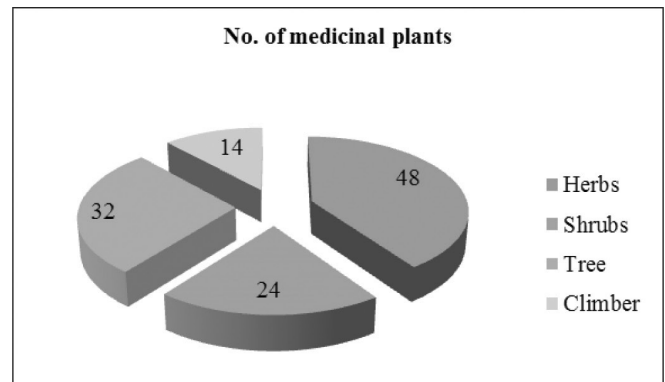


Figure 2: Habit of medicinal plants in the study area.

Out of 118 identified plant species, 117 plant species were identified up to species level, 1 species up to genera level. All total 93 genera belonged to 62 families were recorded during the survey (Table 1). The dominant genera were *Ficus* (3 genera) and followed by 2 genera each for *Allium*, *Artocarpus*, *Calotropis*, *Clerodendrum*, *Cyanodon*, *Jatropha*, *Musa*, *Phyllanthus*, *Remusatia*, *Terminallia* and *Trichosanthes*. The largest family was Poaceae having 7 species followed by Euphorbiaceae, Fabaceae, and Malvaceae (5 spp.) in each, Apocynaceae, Araceae, Cucurbitaceae, and Moraceae (4 spp. in each), and others as shown in Figure 3. According to Acharya & Pokharel (2006); Bhattarai & Acharya (2015) revealed Fabaceae was the dominant family followed by Asteraceae in the second position in medicinal use.

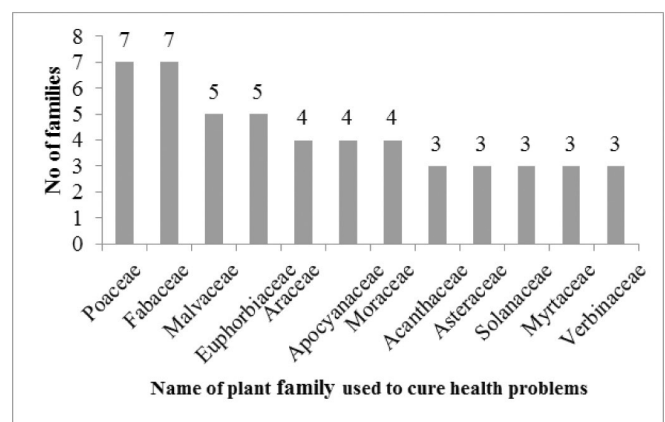


Figure 3: Families of most useful medicinal plants

Among the different medicinal used plant parts, leaves (21 spp.) were the most useful plant parts

followed by root (19 spp.) and others as shown in Figure 4. The study also showed that stem, bark, shoot the whole plant, flower, rhizome, hardwood, stem bulb, and root bulb were used for the medicinal purpose in the study area. According to Shah & Lamichhane (2017) and Acharya (2012), leaves were the most dominant parts prescribed for curing the health disorders. Harvesting of leaves is not very much harmful to the plants than other parts like stem, root, barks, and whole plants, and in the way for flowers and fruits available in seasonally.

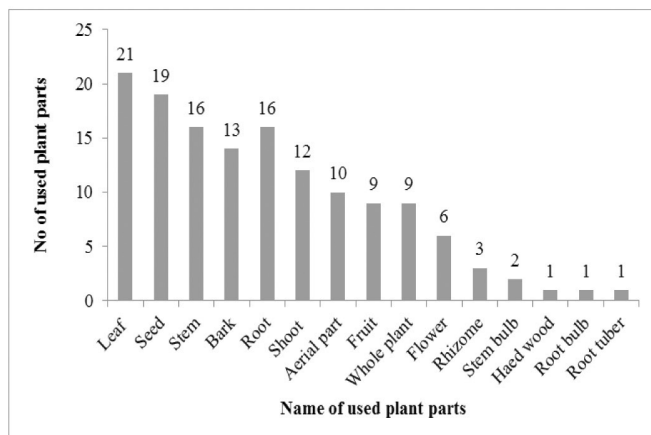


Figure 4: Number of used plant parts for medicinal purpose

In this study, 50 types of human health disorders were cured by using local plants and their system of the traditional therapeutic process. The maximum number of plants i.e. 96 was reported to cure human health disorder followed by 19 for veterinary uses. Among them 4 plants were commonly used in both human health disorder and veterinary uses shown in Figure 5. Gachadar (2006) was also reported Tharu community of Lakhantari, Pakali, and Jagatpur of Morang, Sunsari and Saptari districts respectively were used to cure 43 types of health problems by the local therapeutic process using local plants. Additionally, Chaudhary et al. (2020) has reported 37 species of medicinal plants among them 25 species were used for the various health alignment by Tharu community of Eastern Nepal. Similarly 93 plants reported from Manag (Bhattarai, 2006); 32 from Upper Mustang (Bhattarai et al., 2009); 72 medicinal remedies from Dhadhing (Poudel & Gautam 2008); plants using 18 different health ailments (Maden et al., 2008) and many more from different part of the country.

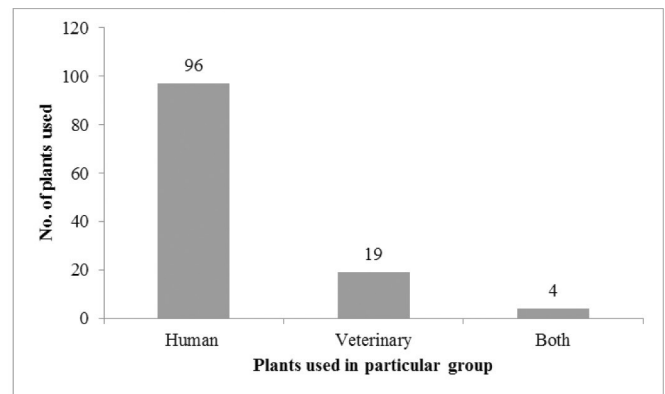


Figure 5: Medicinal plants used in a particular group (Human, Veterinary & both)

Conclusion

A total of 118 plant species under 93 genera and 62 families were used in 50 different health problems by local peoples in Kanchanrup Municipality-6. The common health problems were sexual disorder, cough & cold, diarrhea & dysentery, gastric, skin diseases, cuts & wounds, & others tabulated in (Table 1) also very important health problems. The study area is rich in plant diversity and ethnomedical knowledge of plants. The plants are used by local people as different remedies are only viable in the study area and far beyond any modern medicinal practices.

Author Contributions

All the authors were involved in concept development, research designing, defining of intellectual content and literature research. Vijay Kumar Chaudhary collected and analyzed data, and prepared manuscript. Suman S. Bhattraai edited and reviewed the manuscript. Binod Gautam was helped in the preparation of herbarium and assisting in identification process.

Acknowledgements

My heartfelt gratitude goes to Prof. Dr. Suman Suvedi Bhattarai, Department of Botany, Tri-Chandra Multiple Campus, Ghantaghar, Kathmandu for her kind guidance & support. I give my special thanks to local medicinal plants practitioner Mr. Kamal Bishwokarma, Mr. Kalru Sardar, & Mr.

Lalit Narayan Chaudhary. I would like to thank my family for supporting and all who supported and help during the work

References

- Acharya, E., & Pokhrel, B. (2006). Ethno-medicinal plants used by Bantar of Bhaudaha, Morang, Nepal. *Our nature*, 4(1), 96-103.
- Acharya, R. (2012). Ethnobotanical study of medicinal plants of Resunga Hill used by Magar community of Badagaun VDC, Gulmi district, Nepal. *Scientific World*, 10(10), 54-65.
- Baral & Kurmi. (2004). Ethnomedicinal use of plants from Salyan district, Nepal. *BankoJankari*, 14(2), 35-39.
- Baral, S. R., & Kurmi, P. P. (2006). *A compendium of medicinal plants in Nepal* (pp. 1-534). Mass Printing Press, Nepal.
- Bhattarai, A. P., Bhatt, G. D., Joshi, L., & Baral, S. R. (2009). Ethnobotanical note on medicinal plants used by Aamchis of upper Mustang of Nepal adjoining Tebet. *Bulletin of Department of Plant Resources*, 31, 101-107.
- Bhattarai, K. R. (2018). Ethnobotanical study of plants used by Thami community in Ilam District, eastern Nepal. *Our Nature*, 16(1), 55-67.
- Bhattarai, K.R. & Acharya S. K. (2015). Documentation of ethnobotanical knowledge of Tharu people on the utilization of plant resources in Gadariya and Phulwari VDCs of Kailali District, West Nepal. *Bulletin of Department of Plant Resources*, 37, 41-50.
- Bhattarai, S., Chaudhary, R. P., & Taylor, R. S. (2006). Ethnomedicinal plants used by the people of Manang district, central Nepal. *Journal of Ethnobiology and Ethnomedicine*, 2(1), 1-8.
- Chaudhary, R. P. (1998). *Biodiversity in Nepal: Status and conservation* (pp. 324). Tecpress Books, Thailand.
- Gachhadar, P. (2006). *Indigenous knowledge and practices on medicinal plants among Tharu community in Eastern Nepal*. http://himalaya.socanth.cam.ac.uk/collections/rarebooks/downloads/Gachhadar_Indigenous_Knowledge.pdfReferences
- Harshberger, J. W. (1896). The purposes of ethnobotany. *Botanical gazette*, 21(3), 146-154.
- Karna, K. (1997). *Medicinal plants and traditional medicinal practice in Chapagaun VDC (Village Development Committee) of Lalitpur district, central Nepal*. (Unpublished Masters dissertation), Tribhuvan University, Nepal.
- Kunwar, R. M., Mahat, L., Acharya, R. P., & Bussmann, R. W. (2013). Medicinal plants, traditional medicine, markets and management in far-west Nepal. *Journal of ethnobiology and ethnomedicine*, 9(1), 1-10.
- Kurmi, P. P., & Baral, S.R. (2004). Ethnomedicinal uses of plants from Salyan district, Nepal. *BankoJankari*, 14(2), 35-39.
- Maden, K., Kongren, R., & Limbu, T. M. (2008). Documentation of indigenous knowledge, skill practices of Kirat Nationalities with special focus on Biological Resources. The Report Submitted to Social Inclusion Research Fund (SIRF), SNV Nepal, Nepal.
- Magar, M. S. T., & Neupane, S. (2016). Documentation of indigenous knowledge on medicinal use of plants by Raji Community in West Nepal. *Bulletin of Department of Plant Resources*, 38, 65-72.
- Mahato, R. S., & Sharma, B.N. (2015). Common ethnomedicinal plants of dhanusha district, Nepal. *Bulletin of Department of Plant Resources*, 37, 51-62.
- Manandhar, N. P. (2002). *Plants and people of Nepal*. Timber press.
- Omesh, B., Jitendra, P., & Chaudhary, L. B. (2016). Ethnomedicinal uses of tree species by Tharu tribes in the Himalayan Terai region of India. *Research Journal of Medicinal Plant*, 10(1), 19-41.
- Pandey, J. (2013). Documentation of ethnomedicinal knowledge on plant resources used by magar

- community in Dahnbang VDC, Salyan District. *Bulletin of Department of Plant Resources*, 35, 62-66.
- Poudel, S., & Gautam, C.M. (2008). Studied ethnomedicine of Magar community in Dhadhing district, Central Nepal. *Bulletin of Department of Plant Resources*, 30, 80-86.
- Rokaya, M. B., Munzbergova, Z., Shrestha, M. R., Timsina, B. (2010). Ethnobotanical study of medicinal plants from the Humla district of western Nepal. *Journal of Ethnopharmacology*, 130, 485–504.
- Shah, S., & Lamichhane, D. (2017). Documentation of indigenous knowledge on plants used by Tamang community of Kavrepalanchok district, central Nepal. *Bulletin of Department of Plant Resources*, 15, 45-51.
- Tamang, R., Thakur, C. K., Koirala, D. R., & Chapagain, N. (2017). Ethno-medicinal plants used by chepang community in Nepal. *Bulletin of Department of Plant Resources*, 15(1), 21-30.
- WHO. (2002). *World Health Organization traditional medicine strategy 2002-2005*. WHO, Geneva.

Table 1: List of the medicinal plants and their ethno medicinal uses

S.N.	Vaucher specimen no.	Botanical Name	Local name	Family	Habit	Habitat	Plant availability	Form of medication	Used parts	Uses in health disorders	Used for
1	S ₀₅	<i>Abelmoschus esculentus</i> (L.) Moench	Ramjhingani /Bhindi	Malvaceae	S	P	O	Liquid	shoot, root	Dysentery	H
2	S ₅₅	<i>Abrus precatorius</i> L.	Kajaurmi	Fabaceae		W	R	Infusion	Leaf, root	Rheumatism, Joint pain, Arthritis	H
3	S ₀₆	<i>Abutilon indicum</i> (L.) Sweet	Sakharibhakani/ Bilaakeethopa	Malvaceae	S	W	R	Liquid	Root	Body fever	H
4	S ₁₁	<i>Acacia catechu</i> (L.) Willd.	Khyar	Fabaceae	T	W	C	Paste	Hardwood	Tongue infection	H
5	S ₁₅	<i>Achyranthes aspera</i> L.	Ultachichri	Amaranthaceae	H	W	C	Solid	Leaf, stem	Dysentery, toothache	H
6	S ₀₃	<i>Acoruscalamus</i> L.	Achchheni	Araceae	H	P	C	Liquid	Rhizome	Diarrhea and Dysentery	H/V
7	S ₁₁₈	<i>Adina cordifolia</i> (Roxb.) Brandis	Karman	Meliaceae	T	W	C	Decoction	Bark	Weakness, Tonic for baby mom after delivery	H
8	S ₀₄	<i>Aegle marmelos</i> L.	Bel	Rutaceae	T	P	R	Liquid	Fruit	Dysentery	H
9	S ₀₇	<i>Allium cepa</i> (L.) Correa	Pyaj	Amaryllidaceae	H	P	C	Juice	Stem bulb	Ear pain	H
10	S ₁₇	<i>Allium sativum</i> L.	Lassun	Amaryllidaceae	H	P	C	Cooked in oil	Stem bulb	Cold, joint pain, Arthritis, Antiseptic and pain killer	H/V
11	S ₂₅	<i>Aloe barbadensis</i> (L.) Webb	Ghee Kumari	Liliaceae	H	P	R	Juice	Leaf	Stomachache, Dysentery, Skin diseases	H
12	S ₉₉	<i>Alstonia scholaris</i> (L.) R. Br.	Chhatiyar	Apocynaceae	T	W	R	Infusion, Latex	Bark	Menstrual disorder, Anti worming, weakness, Blood purification	H
13	S ₁₂	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC	Sarhauchi	Amaranthaceae	H	W	C	Vegetable	Shoot	Loss of appetite, Avitaminosis	H
14	S ₂₆	<i>Amorphophallus campanulata</i> (Roxb.) Blume ex Decne	Ol	Araceae	H	P	C	Latex, paste	Stem, flower	Inflammation, Skin boil (pilo)	H
15	S ₂₃	<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Kalpnath	Acanthaceae	H	W	R	Liquid	Leaf, shoot	Body fever	H
16	S ₂₂	<i>Annona reticulata</i> L.	Sarpha	Annonaceae	T	P	O	Juice	Leaf	Lice, external body parasites	H/V
17	S ₃₉	<i>Argemonemexicana</i> L.	Surujkant	Papaveraceae	H	W	C	Oil	Seed	Skin-itching	H
18	S ₂₇	<i>Artocarpus integra</i> (Thunb.) Merr.	Katahar	Utricaceae	T	P	C	Liquid	Seed	Diarrhea	H
19	S ₀₈	<i>Artocarpus lakoochha</i> Roxb.	Badhar	Moraceae	T	W	C	Liquid	Bark, root	Diarrhea and Dysentery	H
20	S ₁₉	<i>Asparagus racemosus</i> Willd.	Sitabari	Liliaceae	H	W	C	Powder	Root tuber	Menstrual disorder, for boosting milk	H/V
21	S ₁₀	<i>Azadirachta indica</i> A. Juss.	Neem	Meliaceae	T	P	C	Decoction, solid	Leaf, stem	Skin allergy, Blood purification, Anti worming	H
22	S ₁₈	<i>Basella alba</i> L.	Porosag	Basellaceae	Cl	W	C	Vegetable	Aerial parts	Avitaminosis	H/V

S.N.	Vaucher specimen no.	Botanical Name	Local name	Family	Habit	Habitat	Plant availability	Form of medication	Used parts	Uses in health disorders	Used for
23	S ₁₆	<i>Bauhinia vahlii</i> Wight and Am.	Malahan/ patripata	Fabaceae	V	W	C	Powder	Stem, root	Piles	H
24	S ₁₀₆	<i>Blainvillea acmella</i> (L.) Philipson	Mirchajajhar/ Lang jhar	Asteraceae	H	W	C	Solid	Fruit	Tongue infection	H
25	S ₄₇	<i>Blumea lacera</i> (Burm.f.) DC.	Mokrajhar	Asteraceae	H	W	C	Juice	Leaf, shoot	Cut	H
26	S ₈₈	<i>Bombax ceiba</i> L.	Simar	Bombaceae	T	W	C	Latex	Stem	Dysentery	H
27	S ₁₄	<i>Brassica campestris</i> L.	Tori	Brassicaceae	H	P	C	Oil	Seed	Nausea, Cold fever, Skin healthy	H/V
28	S ₀₉	<i>Brayophyllum pinnatum</i> L.	Agarmause	Crassulaceae	H	P	R	Liquid, Juice	Leaf	Stomachache, Dysentery, Cut	H
29	S ₀₁	<i>Bryonia lacina</i> L.	Ladvadi	Cucurbitaceae	Cl	W	R	Ash paste	Aerial parts	Skin diseases	H
30	S ₁₀	<i>Calotropis gigantea</i> (L.) Dryand	Ujra Yank	Asclepiadaceae	S	W	R	Liquid	Root	Menstrual disorder	H
31	S ₇₅	<i>Calotropis procera</i> (Aiton) Dryand	Nilo Yank	Asclepiadaceae	S	W	C	Liquid	Root	Weakness	H
32	S ₆₄	<i>Cannabis sativa</i> L.	Bhang	Cannabaceae	H	W	C	Juice, Smoke	Aerial parts	Diarrhea, Dysentery and Tiredness	H/V
33	S ₁₁₇	<i>Capsicum annuum</i> L.	Marchaie	Solanaceae	H	P	C	Oil	Fruit	Ear pain	H
34	S ₂₉	<i>Carex arborea</i> Roxb.	Kumbi	Myrtaceae	T	W	C	Liquid	Bark	Dysentery	H
35	S ₃₁	<i>Carica papaya</i> L.	Areba	Caricaceae	S	P	C	Latex	Aerial parts	Ringworm infection, Jaundice	H
36	S ₆₁	<i>Cathartus roseus</i> (L.) G. Don	Sdabharphool	Apocynaceae	H	P	O	Liquid	Leaf	Diabetes (Sugar imbalance)	H/V
37	S ₇₇	<i>Centella asiatica</i> (L.) Urb.	Bhatpurain	Ulmiferae	H	W	C	Liquid	Whole plants	Gastric Diarrhea and Dysentery	H
38	S ₉₂	<i>Cereus peruvianus</i> (L.) Mill.	Lohajan Kant	Cactaceae	S	P	C	Juice	Stem	Cough	H
39	S ₄₀	<i>Chenopodium album</i> L.	Bathuwa	Chenopodiaceae	H	W	C	Vegetable	Shoot	Blood pressure, Avitaminosis	H
40	S ₃₂	<i>Cinnamomum tamala</i> (Buch.-Ham.) Nees and Eberm.	Patrak	Lauraceae	T		C	Paste	Bark	Headache	H
41	S ₃₅	<i>Cissus quadrangularis</i> L.	Giraha bath/ Lahar bath	Vitaceae	Cl	P	R	Fried vegetable	Shoot	Joint pain/ Arthritis	H
42	S ₃₇	<i>Citrus limon</i> (L.) Burm.	Nemo	Rutaceae	S	P	C	Juice	Fruit	Diarrhea, Dysentery and cough	H
43	S ₃₁	<i>Clerodendrum indicum</i> (L.) Kuntze	Saharphoka	Verbinaceae	S	P	R	Solid	Stem	Skin allergy	H
44	S ₇₃	<i>Clerodendrum viscosum</i> Vent.	Bhaet	Verbinaceae	S	W	C	Liquid	Shoot, Leaf	Blood purification, Anti-worming and Ear pain	H
45	S ₆₀	<i>Coix lachryma-jobi</i> L.	Bajjanti/ Aronagarona	Poaceae	H	W	O	Solid	Seed	Skin boil (Pilo)	V
46	S ₄₆	<i>Corchorus capsularis</i> L.	Patwa	Malvaceae	H	P	C	Ash paste	Bark	Skin burning	H
47	S ₃₀	<i>Croton bonplandianus</i> Baill.	Anchin	Euphorbiaceae	S	W	C	Juice	Shoot, Leaf	Cut	H/V
48	S ₁₃	<i>Cucuta reflexa</i> Roxb.	Amarlati	Cuscutaceae	Cl	W	C	Liquid	Whole plants	Jaundice	H
49	S ₀₂	<i>Curcuma angustifolia</i> Roxb.	Hardi	Seitaminae	H	P	C	Powder	Rhizome	Cough cold and Sneezing	H
50	S ₂₀	<i>Cyanodon dactylon</i> (L.) Pers.	Deebghans	Poaceae	Cr	W	C	Solid, Paste	Whole plants	Cut	H

S.N.	Vaucher specimen no.	Botanical Name	Local name	Family	Habit	Habitat	Plant availability	Form of medication	Used parts	Uses in health disorders	Used for
51	S ₆₂	<i>Cyanodon dactylon</i> (L.) Pers.	Oojaradeebghan	Poaceae	Cr	W	C	Paste	Whole plants	Headache	H
52	S ₄₈	<i>Cyperus rotundus</i> L.	Mothaghans	Cyperaceae	H	W	R	Solid	Root/bulb	Headache	H
53	S ₆₃	<i>Dalbergia sissoo</i> Roxb.	Sisau	Fabaceae	T	W/P	C	Liquid	Leaf	Dysentery	H/V
54	S ₃₆	<i>Datura stramonium</i> L.	Dhuttur	Solanaceae	S	W	C	Solid, smoke	Fruit	Diarrhea, Dysentery and Tiredness	H
55	S ₄₄	<i>Dendrocalamus hamiltini</i> Nees and Am. ex Munro	Bans	Poaceae	S	P	C	Powder	Bark	Wounds	H
56	S ₈₉	<i>Dolichos lablab</i> L.	Chimi sag	Fabaceae	Cl	P	O	Juice	Leaf	Ringworm infection	H
57	S ₃₃	<i>Dropterys</i> sp.	Dhakiya sag	Dryopteridaceae	H	W	C	Liquid	Root	Miscarriage	H
58	S ₃₇	<i>Eclipta prostrata</i> (L.) L.	Bhamorya	Asteraceae	H	W	C	Juice	Whole plants	Hands and foot healings	H
59	S ₂₄	<i>Eleusine indica</i> (L.) Gaertn.	Marwainighans	Poaceae	H	W	C	Solid, Liquid	Root	Eye infection	H
60	S ₂₈	<i>Eulaliopsis binata</i> (Retz.) C. E. Hubb.	Saabai	Poaceae	H	W	C	Paste	Whole plants	Urinary problem	H
61	S ₃₄	<i>Euphorbia royleana</i> Boiss.	Pasid	Euphorbiaceae	S	P	R	Solid	Leaf	Cough and cold	H
62	S ₄₁	<i>Ficus glomerata</i> Roxb.	Dumair	Moraceae	T	W	C	Latex	Aerial parts	Cough and cold	H
63	S ₃₈	<i>Ficus hispida</i> L. f.	Khokhas	Moraceae	T	W	C	Pudding, Latex	Aerial parts	Miscarriage, cough and cold	H
64	S ₄₅	<i>Ficus religiosa</i> L.	Peepal	Moraceae	T	W/P	C	Decoction	Decoction	Foot and moth diseases	V
65	S ₄₂	<i>Glycyrrhiza glabra</i> L.	Jethimandu	Fabaceae	Cl	C	NA	Solid	Stem	Dry cough	H
66	S ₃₇	<i>Hibiscus rosa-sinensis</i> L.	Arhulphool	Malvaceae	S	P	C	Liquid	Flower	Menstruation disorder	H
67	S ₇₀	<i>Holarrhena pubescens</i> (Buch-Ham.) Wall.	Koraiya	Apocynaceae	T	W	C	Decoction	Bark	Blood pressure, Mental disorder	H
68	S ₃₉	<i>Hygrophila auriculata</i> (Schumacher) Heine,	Baaglakant	Acanthaceae	S	W	O	Liquid	Seed	Sexual disorder (Dhaturog)	H
69	S ₃₂	<i>Ipomoea carnea</i> Jacq.	Karmi sag/ Latikarmi	Convolvulaceae	Cl	W	R	Juice	Whole plants	Skin allergy	H
70	S ₅₁	<i>Jatropha gossypifolia</i> L.	LalkaBaghandi	Euphorbiaceae	S	W	C	Infusion	Stem, root	Weakness, loss of appetite, Tonic for child delivered women	H
71	S ₃₀	<i>Jatropha curcas</i> L.	Baghandi	Euphorbiaceae	S	W	C	Infusion, solid	Stem, root	Weakness, loss of appetite, Tonic for child delivered women	H
72	S ₆₅	<i>Justica adhatoda</i> L.	Bakas	Acanthaceae	S	W	R	Decoction	Bark, Leaf	Blood purification, Asthma, cough and cold	H
73	S ₆₈	<i>Lagenaria siceraria</i> (Molina) Standl.	Sajwine/ Lauka	Cucurbitaceae	Cl	P	O	Ash paste	Aerial parts	Skin diseases	H
74	S ₃₃	<i>Lepidium sativum</i> L.	Chamsoor	Brassicaceae	H	P	C	Solid	Seed	Eye infection (Eye clearance from dust and any causality from external bodies)	H
75	S ₇₉	<i>Leucas indica</i> L.	Dulphii	Labiatae	H	W	C	Juice, Pickle	Shoot	Cough and Cold	H/V
76	S ₁₁₆	<i>Machilus gambleri</i> King ex	Daradmeda	Lauraceae	T	W	R	Paste	Bark	Bone dislocation, Fracture of	H

S.N.	Vaucher specimen no.	Botanical Name	Local name	Family	Habit	Habitat	Plant availability	Form of medication	Used parts	Uses in health disorders	Used for
		Hooke.f.								external body parts	
77	S ₆₆	<i>Macrotyloma uniflorum</i> (Lam.) Verdc	Kurthi Daal	Fabaceae	H	P	C	Infusion	Seed	Kidney stone	H
78	S ₃₄	<i>Madhuca longifolia</i> (Koenig) Macbride	Mahuwa	Sapotaceae	T	W	R	Liquid	Flower	Tiredness	H
79	S ₇₁	<i>Mangifera indica</i> L.	Aaam	Anacardiaceae	T	P	C	Decoction	Bark	Jaundice	H
80	S ₈₄	<i>Mimosa pudica</i> L.	Lajjunijhar	Fabaceae	H	W	C	Latex	Aerial parts	Eye infection	H
81	S ₉₈	<i>Musa balbisiana</i> Colla	Aathiyakera	Musaceae	H	P	C	Solid	Fruit, root	Dysentery, Naseko, Vedeko	H
82	S ₇₆	<i>Musa paradyaica</i> L.	Natwarkera	Musaceae	H	P	C	Solid	Fruit	Piles	H
83	S ₈₆	<i>Nelumbo nucifera</i> Gaertn.,	Kamal phool	Nymphiaceae	H	W	R	Liquid	Flower	Excess bleeding during menstruation periods	H
84	S ₉₀	<i>Nigella sativa</i> L.	Mangrel	Ranunculaceae	H	P	C	Powder	Seed	Cough and cold	H
85	S ₆₇	<i>Ocimum tenuiflorum</i> L.	Tulsi	Labiatae	S	P	C	Liquid, Paste	Seed, Leaf, Shoot	Vomiting, Snake bite, Cough and cold	H
86	S ₅₆	<i>Opuntia monacantha</i> Haw.	Bagiyakant	Cactaceae	S	W	R	cooked in oil	Leaf	Rheumatism, Joint pain, Arthritis, Diarrhea	H/V
87	S ₆₉	<i>Oroxylum indicum</i> (L.) Kurz	Patsan/ Sonpati	Bigoniaceae	T	P	R	Infusion	Bark	Hepatitis, Jaundice	H
88	S ₇₄	<i>Oxalis corniculata</i> L.	Amrola	Oxalidiaceae	H	W	C	Paste	Whole plants	Skin boil (Pilo)	H
89	S ₈₇	<i>Phyllanthus emblica</i> L.	Rikhya	Phyllanthaceae	T	W	C	Powder, Paste	Fruit	Gastric, Indigestion, Hairtropic	H
90	S ₄₉	<i>Phyllanthus reticulatus</i> Poir.	Sikait/ Sikraitjhar	Phyllanthaceae	S	W	C	Liquid	Stem	Ear pain	H
91	S ₇₂	<i>Piper betle</i> L.	Paan	Piperaceae	Cl	P	C	Solid	Leaf	Harital, Naseko	H
92	S ₉₁	<i>Polygonum barbatum</i> L.	Bisnaayar	Polygonaceae	T	W	C	Solid	Whole plants	Lice, external body parasite	V
93	S ₇₈	<i>Psidium guajava</i> L.	Lataam	Myrtaceae	T	P	C	Liquid	Shoot	Vomiting	H
94	S ₉₅	<i>Rauwolfia serpentina</i> L.	Isarganj	Apocynaceae	S	P	R	Powder	Root	Blood purification, Anti-worming, Gastric and Loss of appetite	H
95	S ₈₀	<i>Remusatia hookeriana</i> Schott	OojraKachchu	Araceae	H	P	C	Liquid	Root	Tail wound	V
96	S ₁₀₀	<i>Remusatia vivipara</i> (Roxb.) Schott	Kariyakachchu	Araceae	H	W	C	Latex	Stem, root	Eye infection, Skin boil (Pilo)	H
97	S ₈₈	<i>Rhododendron arboreum</i> L.	Laligurans	Ericaceae	T	W	NA	Juice, Paste	Flower	Throat infection by ingestion of fish spine	H
98	S ₁₂₆	<i>Ricinus communis</i> L.	Andi	Euphorbiaceae	T	W	C	Oil	Seed	Inflammation, Skin boil (pilo)	H
99	S ₁₃₅	<i>Saccharum spontaneum</i> L.	Ranrighans/ Kushyaer	Poaceae	H	W	C	Juice	Stem	Urinary problem	H
100	S ₈₁	<i>Schleichera oleosa</i> (Lour.) Oken,	Aathiyar/ Kusum	Spinadaceae	T	W	C	Oil	Seed	Hand and foot healing	H
101	S ₉₇	<i>Scoparia dulcis</i> L.	Mishrikant/ Chinijhar	Scrophulariaceae	S	W	C	Liquid	Leaf	Menstruation disorder, Diabetes	H
102	S ₈₅	<i>Semecarpus anacardium</i> L.	Bhela	Anacardiaceae	T	W	C	Resin	Seed	Inflammation and Joint pain	H/V

S.N.	Vaucher specimen no.	Botanical Name	Local name	Family	Habit	Habitat	Plant availability	Form of medication	Used parts	Uses in health disorders	Used for
103	S ₁₁₁	<i>Sesamum orientale</i> L.	Til	Pedaliaceae	H	P	C	Infusion	Seed	Menstruation disorder	H
104	S ₁₀₁	<i>Shorea robusta</i> Gaertn., Fruct.	Sakhwa	Dipterocarpaceae	T	W	C	Resin	Stem	Dysentery	H
105	S ₁₀₄	<i>Solanum xanthocarpum</i> Schrad. and Wendl.	Katgani	Solanaceae	S	W	C	Smoke	Seed	Toothache	H
106	S ₉₃	<i>Strychnos nux-vomica</i> L.	Koechla	Loganiaceae	T	P	R	Infusion	Seed	Blood purification, Dog bite, Poisonous for dog	H/V
107	S ₁₃₁	<i>Syzgium cumini</i> (L.) Skeels	Jam	Myrtaceae	T	W	C	Decoction, Juice, Paste	Seed, Bark, Leaf	Mouth and foot diseases, Dysentery, Blood pressure	H/V
108	S ₁₀₂	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Behra	Combretaceae	T	W	C	Powder	Seed	Dysentery, Gastric	H
109	S ₉₆	<i>Terminalia chebula</i> Retz.	Hairra	Combretaceae	T	W	C	Powder	Seed	Dysentery, Gastric	H
110	S ₈₂	<i>Tinospora cordifolia</i> (Willd.) Hook. f. and Thoms.	Gurujlati	Menispermaceae	Cl	W	C	Infusion	Stem	Gastric, Urinary problem	H
111	S ₈₃	<i>Trachyspermum ammi</i> (L.) Sprague	Jamain	Apiaceae	H	P	C	Solid, Decoction	Seed	Indigestion, Promote lactation baby's mom after delivery	H/V
112	S ₁₁₉	<i>Trichosanthes tricuspidata</i> Lour	Oojaramahkari	Cucurbitaceae	Cl	W	R	Powder	Root	Paralysis, Promote lactation baby's mom after delivery	H/V
113	S ₉₄	<i>Trichosanthes wallichiana</i> (Ser.) Wight, Ann. and Mag.	Lalakamahkari	Cucurbitaceae	Cl	W	R	Solid	Fruit	Miscarriage	V
114	S ₁₀₃	<i>Ulmus</i> sp.	Bhaiser	Ulmaceae	T	P	R	Liquid	Flower	Menstruation disorder	H
115	S ₁₂₉	<i>Urena lobata</i> L.	Bariyar	Malvaceae	S	W	R	Paste	Root	Ringworm infection	H
116	S ₁₂₁	<i>Vitex negundo</i> L.	Sinmaeer	Verbinaceae	T	W	C	Juice	Shoot	Headache	H
117	S ₁₀₅	<i>Zingiber officinale</i> Rosc.	Aadi	Zingiberaceae	H	P	C	Juice, Solid, Paste	Rhizome	Paralysis, cough and cold	H/V
118	S ₁₀₈	<i>Zizyphus mauritiana</i> Lam.	Bair	Rhamnaceae	T	W/P	C	Solid	Aerial part	Eye infection	H

Note: H=Herb, S=Shrub, T=Tree, P=Planted, W=Wild, W/P= Wild and Planted; C=common, R=Rare, O= Occasional; H=Human, V= Veterinary and H/V= Both (Human and Veterinary).