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Ethnomedicinal plants of Lepcha community in Ilam district, eastern Nepal

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Abstract

Ilam district is situated in eastern part of Nepal and main tribes of the district are Lepcha, Rai, Limbu, Tamang, Sunuar and Gurung. The present investigation document ethnomedicinal properties of 35 species of plants belonging to 33 genera under 28 families. The plants parts are commonly used in the treatment of various diseases like pneumonia, asthma, fever, diarrhea, bronchitis, dysentery, diabetes, measles, jaundice, typhoid, syphilis, ulcer and blood pressure.

Key words: Ethnic community, ethnomedicinal plants, documentation, diseases, tribe

Introduction

Ilam district is situated on foot hills and mountains of eastern Himalayas of Nepal. The altitude of this district ranges from 140 m to 3,636 m covering an area of 1,714 sq km (DFO Ilam, 2010). The climate is tropical monsoon type and vegetations are predominantly of mixed broad leaved monsoon deciduous type. This is rich in diversity of medicinal plants and also in cultural community. The main tribes of this district are Lepcha, Rai, Limbu, Sherpa, Sunuwar Gurung, Tamang etc. Lepcha is a Tibeto-Burman language speaking group of people living in Panchakanya, Phikal, Jirmale, Irautar, Kolbung and Samalbung village development committees of south east Ilam. They also live in Sikkim, Darjeeling and Bhutan. However, Lepchas came from the eastern direction of Assam and Burma and settled in Sikkim (White, 1971) and eastern part of Nepal.

The Lepchas are characterized by Mongoloid morphological features (Gorer, 1938). They were hunters and gatherers (Mukhopadhyay *et al*.,1996) and used to live complete roaming life. Lepcha community is very rich in language, heritage and culture. Historically, they are independent rulers of eastern region of the Kankai River. Their home land was tax free state. Most of the places in Ilam are named after Lepcha language. Because of their traditional religious belief and lack of education, their landsite has gone to the other hands. The size of migration ratio is also a cause of endangered situation in their traditional home land. Being one of the oldest tribes in Ilam, Lepchas have successfully managed to carry their ancient knowledge of ethnomedicinal practices.

Previously several workers have contributed to different aspects of ethnomedicinal plants used by different ethnic community. The significant effort in field of medicinal plant was made by Manandhar 1989a, 1989b; Basnet *et al.* 1998 (Chepang), Manandhar 1990 (Danuwar), Acharya 1996, Shrestha 1998 (Gurung), Siwakoti and Siwakoti 1998 (Limbu), Acharya 1996 (Magar), Manandhar 1986 (Mooshar), Manandhar 1998 (Raute), Siwakoti *et al*. 1997 (Satar), Bhattarai

1989 (Sherpa), Manandhar 1991 (Tamang), Manandhar 1985, Dangol and Gurung 1991 and Acharya 1996 (Tharu) and Rai 2004 (Meche). Any research work on ethnomedicinal plants of Lepcha tribe of Nepal has not been conducted till date so the present paper aims to highlight the medicinal plants used by Lepcha community of Ilam district.

Materials and Methods

The present study was based on field survey and workshop. Field survey was conducted during 2010 covering different villages of Panchakanya, Phikal, Jirmale, Irautar, Kolbung and Samalbung. During the field visits, local names and ethnomedicinal information was collected through oral interviews and group discussions with local resources persons, rural persons, farmers and elders. Information was also collated from a "Workshop on Ethno- Bioresources" conducted in Jhapa District committee hall Chandragadi during 2010 where Lepcha, Rajbanshi, Kishan, Meche, Satar, Tajpuria etc. ethnic groups of eastern Nepal gathered and information were collected by arranging group discussion and distribution of survey form. Voucher specimens were collected from the field during the flowering and fruiting periods and herbarium were made. The specimens were identified with the help of taxonomic literature and national herbarium and plant laboratories, Godawari, Lalitpur, Nepal.

Results and Discussion

The plants species are enumerated alphabetically with their botanical names, families, local names, name of diseases in which they are used and part(s) used (Table 1). The plants parts commonly used in the treatment of various diseases like pneumonia, asthma, fever, diarrhoea, bronchitis, dysentery, diabetes, measles, jaundice, typhoid, syphilis, ulcer, blood pressure etc has been described. These medicinal plants are used to cure over 32 problems which can further be grouped under 13 main disease group. Out of 35 species, 8 are used in stomach problem. 7 in fever, 6 in diarrhea and dysentery, 6 in rheumatism, 5 in skin problem, 3 in asthma, 3 in ulcer, 3 in gonorrhea and remaining species in other health problems (Figure 1). Various species are used to treat more than one disease. Lepcha community use fruit of 11 species, leaves of 9 species, root of 9 species, bark of 8 species, whole plant of 4 species, flower of 4 species and other parts to cure diseases (Figure 2).

Table 1. Enumeration of plant species with their ethnomedicinal uses.

Botanical name	**Family**	**Common name**	**Diseases**	**Part(s) used**
Aconitum heterophyllum Wall.	Ranunculaceae	Bikhuma	Asthma, Stomach ache, Fever,	Root
Acorus calamus L.	Araceae	Bojho	Bronchitis, Diarrhea, Fever	Rhizome
Aegle marmelous Corr.	Rutacceae	Bel	Constipation, Dysentery, Diarrhoea	Fruit, roots
Artemisia vulgaris L.	Asteraceae	Tite pati	Skin disease, Ulcer, Cough	Stem, Leaf
Aloe vera (L.) Burm. F.	Liliaceae	Ghiu Kumari	Muscle pain, Indigestion, Skin burns	Leaf
Azadirachta indica A.Jus.	Melaiceae	Neem	Diabetes, Skin disease	Bark, Leaf
Cinnamomum tamala Ness. & Eberm	Lauraceae	Tejpatta	Diarrhoea, Rheumatism	Leaves
Cuscuta reflexa Roxb.	Convolvulaceae	Pahelo lahara	Ulcer, Jaundice	Whole plant

Dichoroa febrifuga Lour.	Hydranageaceae	Basak	Fever	Leaves
Drymaria cordata Willd.	Caryophyllaceae	Abhijalo	Fever, Pneumonia	Whole plant
Evodia fraxinifolia	Rutaceae	Khanakpa	Typhoid, Indigestion	Fruits
Ficus racemosus L.	Moraceae	Dumri	Piles	Bark
Ficus cunia Ham.	Moraceae	Khasre khanu	Visceral obstruction	Latex, Roots
Imperata cylindrica (L.) Raush. Vaugan	Poaceae	Siru	Fever, cough, jaundice	Root, flower, stem
Juglans regia L.	Juglandaceae	Okhar	Intestinal worm infection Rheumatism	Bark and fruit
Litsea citrate Bl.	Lauraceae	Siltimmur	Stomach disorders	Fruits
Mentha spicata L.	Lamiaceae	Pudina	Headache, acidity cholera	Leaves, shoot
Michelia champaca L.	Magnoliaceae	Champ	Fever and Pharyngitis	Bark and flower
Nasturtium officinale RB	Brassicaceae	Sim sag	Measles	Whole plant
Oroxylum inicum Vent.	Bignoniaceae	Totola	Burns, Pneumonia, Fever	Flowers, seeds
Piper longum L.	Piperaceae	Pipla	Rheumatism, Asthma, Gonorrhea, piles	Fruits and roots
Phyllanthus emblica L.	Euphorbiaceae	Amla	Dysentery, Indigestion, Gonorrhea	Bark and fruit
Phytolacca acinosa Rox	Phytolaccaceae	Jaringo	Body aches, Throat infec.	Leaves, Roots
Pteris biaurita L.	Pteridaceae	ThadayUniu	Cuts and Wounds	Stem
Rhus semialata Murr.	Anacardiaceae	Bahkimlo	Diarrhoea, Dysentry	Fruits
Rhododendron arboreum	Ericaceae	Laliguras	Diarrhoea, Dysentry	Fresh flower
Rubus ellipticus Smith	Rosaceae	Aselu	Colic pains, Helminth inf.	Roots, fruits, young shoot
Rumex nepalensis Spren.	Polygonaceae	Halhaley	Colic pain,Syphilis,Ulcer	Root and leaves
Sechium edule Sw.	Cucurbitaceae	Iskus	Anaemia	Leaves
Terminalia chebula	Combretaceae	Harro	Indigestion, Diarrhoea	Fruits, bark
T. belerica Roxb.	Combretaceae	Barro	Asthma, Tonsillitis, Toothache	Fruits, bark
Thysanolaena maxima (Roxb.) Kurtz	Poaccae	Aumliso	Boils and Burns	Roots
Urtica dioica Linn.	Urticaceae	Sisnoo	Low blood pressure	Leaves, shoots
Viscum articulatum Bar.	Loranthaceae	Harchur	Body pain, Bone fracture	Whole plant
Zanthoxylum acanthopodium L.	Rutaceae	Boke timur	Fever and Cholera	Seeds, bark and fruit

Native people residing in different geographical belts depend on local plant and plant products to meet their daily requirements for food, fodder, medicines etc. Indigenous medicinal practices have been culturally accepted during all phases of human culture and environmental evolution (Thakur, 2011). The traditional knowledge of the Lepcha community of Ilam district has remarkable ethnobotanical importance. They use plants and their parts such as fruits, leaves, roots, rhizomes, tubers, stem, bark, flowers, seeds etc. in various purposes in their daily life. It is evident from the present study that the tribal communities are dependent on a variety of plants to meet their requirements and beliefs to cure many diseases. As the result of the recognition of medicinal plants and their related indigenous knowledge, the number of people and national and international institutions looking for information on these plants is increasing very quickly. So, there is an urgent need to merge and arrange all available information on medicinal plants of Nepal.

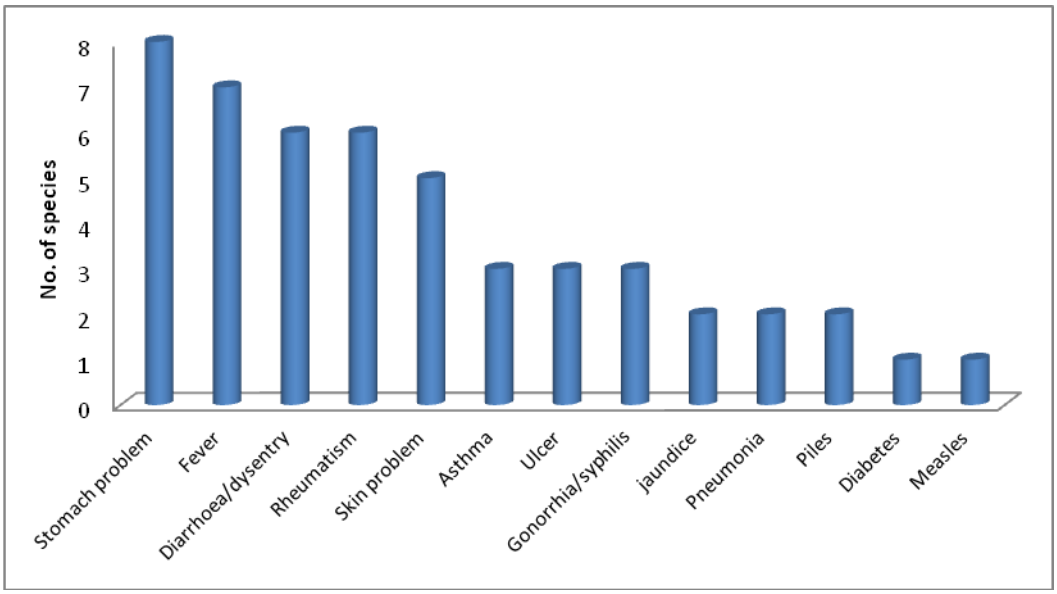

Figure 1. Number of plant species used in treatment of different diseases by Lepcha

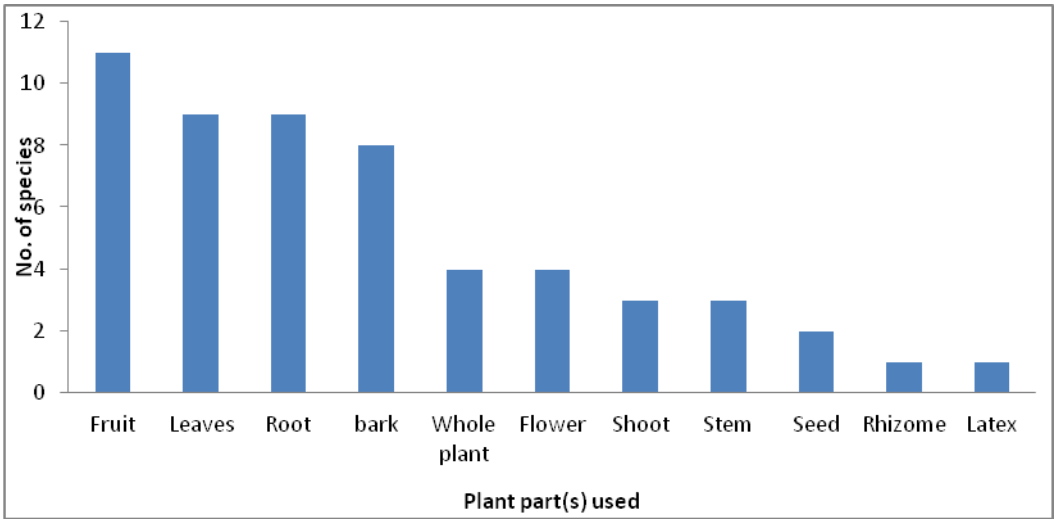

Figure 2. Frequency of plant part used by Lepcha community of Ilam.

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