



## Medicinal Plants use and Primary Health Care in Sikkim

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*More than 80% of the population of Asian and African countries depends on traditional medicine for primary health care. So local knowledge is becoming increasingly importance in Primary health care system in Sikkim. The paper deals with 23 species of medicinal plants, which are arranged alphabetically. In enumeration, the details include correct botanical names with authority, family to which it belongs, local names, followed by parts used and names of diseases. The studied 23 medicinal plants have been used in 33 common diseases which require primary health care. This study also found the traditional healers are act as health care actors for treating arthritis, fracture, jaundice, diarrhea and respiratory diseases of children with other persistence, long lasting chronic health conditions.*

**Key words-** primary health care, traditional healers, medicinal plants, diseases

Primary health care is a new approach to health care which integrates at the community level of all the factors required for the improving the health status of the population. It defines as “Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individual and family in the community through their full participation and at cost that the community and the country can afford to maintain at every stage of their development in the spirit of self determination”<sup>1</sup>. In some Asian and African countries, 80% of the population depends on traditional medicine for primary health care<sup>2</sup>.

There is a growing focus on the importance of medicinal plants and traditional health systems in solving the primary health care problems of the world. Our country have no primary health care and practically non-existent veterinary care in our rural areas because the expensive western system is too slow to meet the critical health care needs of our exploding population<sup>2</sup>. So It is becoming increasingly importance to restore and document local knowledge for Primary health care system<sup>3</sup>. A survey conducted by the all India coordination research project on Ethno- biology (AICRPE) during last decade recorded 8000 species of wild plants used by tribal and other traditional communities in India for treating various health problems<sup>4,5</sup>. In fact, these medicinal plants are readily available, environment friendly, cheap and without side effect for primary care<sup>6</sup>.

Sikkim Himalaya represents an extremely unique eco-system rich in medicinal plants wealth, occupied an important position in primary health care of people of the state<sup>7</sup>. Sikkim is only state in the country to achieve national norm of establish one primary health centre for 20,000 people and one PHSC for 3,000 people. However, traditional medicine has continued to play an important role in state<sup>8</sup>. There are a large number of traditional healers-Dhami, Jhakri, Phendongba and Bombo in Nepali community, Pow and Nejum in Bhutia community and Bunthing in the lepcha community<sup>9</sup>.

The global demand for natural medicines are growing day to day as almost 80% of the human population in developed communities relies on traditional, largely natural medicine to meet their primary health care needs<sup>10</sup>. Some studies on local health tradition and its relation with primary health care are available<sup>11</sup>, but specific study on medicinal plants used for primary health care. Therefore this observational study was designed to document the existing knowledge of medicinal plants used in primary health care among the people of Sikkim

### Methods

were obtained through interviews using both structures and semi structured questionnaires, group discussion and reviewing published and unpublished documents. Purposive sampling was used to interview to elderly person, traditional midwives, folk healers in six villages around Gangtok. The Sample involves 65 elderly

person, 12 traditional midwives and 43 folk healers. The local authorities of the particular village were identifying the medicinal plants of their use and scientific identification was done by BSI, Gangtok.

The paper deals with 23 species of medicinal plants, which are arranged alphabetically. In enumeration, the details include correct botanical names with authority, family to which it belongs, local names, brief description for easy identification in field, followed by parts used and names of diseases.

## Enumeration

### 1. *Aconitum bisma* (Hamilton) Rapaics

Herbarium number-134

Family - Ranunculaceae

Local names; Bikma, Seto Bikhma

Parts used : Tuberous roots

Uses: - The tuber paste with hot water is used in Diarrhea, dysentery, food poisoning, anorexia. The tuber paste with honey is used in common cold, Cough, Bronchitis, deviation of nasal septum (DNS), Sinusitis.

### 2. *Aeschynanthus sikkimensis* (Clarke) Stapf.

Herbarium number-135

Family Gesneriaceae

Local name: Baklay patay

Parts used : Whole plant

Uses: Decoction of root is taken in viral flu & fever. Fresh flowers are taken to cure pharyngitis, Tonsillitis. The whole plant paste is used in fracture.

### 3. *Alnus nepalensis* D. Don.

Herbarium number-136

Family Betulaceae

Local names: Utis,

Parts used; Leaves and barks

Uses: Leaf paste is applied on cuts and wounds. Bark powder is used to treat burns. decoction of root bark is used against diarrhea and dysentery.

### 4. *Artemisia indica* Willd.

Herbarium number-74

Family: Asteraceae

Local Names: Titepati, Khempo, Tuk-gnyel, Nagdona, Mug-wort.

Parts used: Whole plant.

Uses: Plant is used as anti helminthic, stomachic, purgative, antispasmodic, insecticide. Leaf juice is applied nasal bleeding, wound and cuts. Decoction of leaves is used to cure cough, amoebic dysentery and also given to children in measles and fever. Decoction of whole plant is used in skin diseases, allergies, to remove dandruff and to improve hair growth. A ground flower is taken against liver disorder and epilepsy. Crushed leaves is applied on forehead to reduce headache. Leaves are kept under the bed to drive out bugs and insects.

### 5. *Astilbe rivularis* Buch.-Ham. ex D. don

Herbarium number- 137

Family: Saxifragaceae

Local names: Buriokhati,

Parts used: Rhizomes and leaves.

Uses: The pounded rhizome is taken with honey to cure general body pain, gastritis and constipation. Rhizome paste is taken along with honey to control excessive postpartum bleeding, diarrhoea, dysentery and

is also applied over the bone fracture and dislocation or joints. Rhizome juice is useful against peptic ulcer. Leaves are chewed as blood purifier and in toothache.

#### 6. *Betula alnoides* Buch. Ham.ex D.Don

Herbarium number- -139  
Family: Betulaceae  
Local names: Saur.  
Parts used: Bark.

Uses: Stem bark paste is used to massage on sprain to get relief from pain. Stem bark paste mixed with leaves pastes of *Cissampelos pareira* is taken to cure excessive menstruation. Decoction of bark is used against post natal pain, joint pain, cough, stomachic and diarrhea.

#### 7. *Bridelia retusa* (L.) Spreng.

Herbarium number-141  
Family: Euphorbiaceae  
Local names: Gaya,  
Parts used; Root, stem bark, leaves and fruits.

Uses: Decoction of stem bark juice is taken against jaundice. Fruit is tonic. Leaf juice with mustard oil is applied on wounds and swellings.

#### 8. *Clematis buchananiana* DC.

Herbarium number-142  
Family Ranunculaceae  
Local names: Pinase Lahara,  
Parts used: Whole plant.

Uses: Root powder is inhaled through nostril to cure sinusitis. Plant paste is used to massage the affected parts to treat gout and is also applied on cuts and wounds. Root juice is taken against food poisoning.

#### 9. *Commelina benghalensis* L.

Herbarium number-143  
Family: Commelinaceae  
Local names: Kane Jhar, Kanchara,  
Parts used: Whole plant.

Uses: The plant is bitter, emollient, laxative and refrigerant. The leaf paste is applied on muscular pain, burns, boils and also useful against tonsillitis. Plant extract with honey is taken to cure cough and useful in leprosy.

#### 10. *Curcuma caesia* Roxb.

Herbarium number-144  
Family: Zingiberaceae  
Local names: : Kalo hardi,  
Parts used: Rhizomes.

Uses: A rhizome is used in haemorrhoids, cancer, tumors, AIDS and tuberculosis. Its decoction is also used in fever and food poisoning.

#### 12. *Entada rheedei* Sprengel

Herbarium number-146  
Family: Mimosaceae  
Local names: : Pangra,  
Parts used: Seeds.

Uses: Seeds paste is applied on mumps, swelling and is also used for washing hairs to remove dandruff.

**13. Equisetum diffusum D.Don**

Herbarium number-148

Family: Equisetaceae

Local names: : Kukare jhar, Aankhle Jhaar,

Parts used: Whole plant.

Uses: Root juice is taken against indigestion. Root paste or whole plant paste is applied over the sprain and bone dislocation. Plant juice is taken to cure chest complaints, liver problems, mouth sores and also useful in kidney stones. It is also used in dog bite.

**14. Eupatorium adenophorum (Spreng.) King & Robinson**

Herbarium number-151

Family : Asteraceae.

Local names: : Kalijhar, Banmaara,

Parts used: Leaves.

Uses: Leaf Juice is applied on cuts to stop bleeding and young leaf paste is applied on wounds and also used to rub on the sprained parts to relieve pain and swelling.

**15. Heracleum wallichii DC.**

Herbarium number-152

Family: Apiaceae.

Local names: : Chimping,

Parts used: Roots and fruits.

Uses: The decoction of roots is taken as tonic in Tuberculosis. The powder of root is used in Erectile dysfunction . Fruits are taken against stomach disorders, cough, cold and bodyache.

**16. Kaempferia rotunda L.**

Herbarium number-153

Family: Zingiberaceae

Local names: Bhuichampa

Parts used: Tubers.

Uses: The tuber is aromatic, anti-inflammatory, thermogenic and stomachic. Tuber paste is applied on wounds, mumps and swelling. The tuber paste along with the root paste of *Urtica dioica* and paste of *Viscum articulatum* is applied extremely on bone fracture and dislocation of bones.

**17. Melia azedarach L.**

Herbarium number-154

Local name- Bakaino, Persian liliac (Eng)

Parts used- Whole plant

Uses- Root bark is used in post labour pain. Leaf juice is used for skin diseases, cough, worm infestation , malaria, fever etc.

**18. Podophyllum hexandrum Royle. -**

Herbarium number-155

Family: Podophyllaceae

Local names: Laghu patra, , Ban kakari,

Parts used: Roots, rhizomes, leaves and fruits.

Uses: The rhizomes and roots are considered purgative, stimulant, hepatic, blood purifier, cholagogue, bitter tonic and also used in anti-cancer formulations in modern medicines. Root paste is applied on cuts, wounds and ulcer. The pounded root and rhizome is taken with water to cure fever,

jaundice, cough and gastritis. Rhizome paste is applied on vagina to cure gynaecological infections. Leaf juice is taken to expel intestinal worms, Ripe fruit is eaten in constipation and piles .

### 19. *Rhododendron arboretum* Smith

Herbarium number-156

Family: Ericaceae

Local names: Lali-Gurans

Parts used: Bark and flowers.

Uses: Root bark juice is taken to cure pneumonia. Stem bark juice is taken against cough. Young leaf paste or juice is applied to the forehead for headache and also used for rheumatic pain. Fresh or dried flowers are chewed to treat menstrual disorders, dysentery and in case of a fish bone stuck in the throat. The flowers are harvested and fermented into local wines called 'guranse' and this wine is believed to be an antidote for altitude sickness.

### 20. *Rhus chinensis* Miller

Herbarium number-157

Family: Anacardiaceae.

Local names Bhakiamilo,.

Parts used: Fruits.

Uses: Decoction of fruits is taken to cure diarrhea, dysentery and stomach disorders. Fruit powder is taken with water to cure dysentery, gastritis and also useful in food poisoning and gastritis.

### 21. *Rheum australe* D.Don.

Herbarium number-158

Family: Brassicaceae

Local names: Mula, Laphup, Muli, Radish.

Parts used: Root, leaves and seeds.

Uses: Soup prepared from fermented Radish is useful in diarrhea and tiredness. Root soup is good in tumor, piles, heart diseases, hiccups, leprosy and cholera, Leaf juice is used as ear ache, diuretic and laxative. The seeds are digestive, carminative, expectorant and laxative.

### 22. *Sonchus wighatianus* DC

Herbarium number-159

Family- Asteraceae

Local Name-Ban rayo

Part used- Latex and young Leaf

Uses-The latex is used to stop bleeding and young leaf juice is used for gastritis and conjunctivitis.

### 23. *Urtica parviflora* Roxb.

Herbarium number-160

Family: Urticaceae.

Local names: Sisnu

Parts used: Roots and leaves.

Uses: Root is chewed to cure throat pain. Leaves are cooked as a vegetable and taken against high blood pressure.

### 24. *Zanthoxylum oxyphyllum* Edgew., Syn. *Zanthoxylum violaceum* Wall.

Herbarium number-161

Family: Rutaceae;

Local name: Bhainsi timur (N)

Parts used: Bark;and seed oil

Medicinal uses: Stomachache. The seed oil is used for body pain, tonsillitis, headache

## Discussion & Conclusion-

The studied 23 medicinal plants have been used in 33 common diseases which can require in primary health care. The maximum uses part is rhizome, root and tuber(9/23) followed by leaf (8/23) and whole plants(6/23), bark (5/23), Fruits(4/23), seeds and oil (3/23) and one flower. This study also demonstrated that Folk healers of Sikkim not only know the identification and uses of medicinal plants, but also they act as health care actor for treating arthritis, fracture, jaundice, diarrhea and respiratory diseases of children with other persistence, long lasting chronic health conditions<sup>12,13</sup>.

There have been efforts to revitalize the local health tradition for primary health care needs in our country and this study can help in exploration of medicinal plants in primary health care.

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