

## Original Research Article

# Some medicinal plant from Kathmandu Valley, Central Nepal

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## ABSTRACT

**Background:** This paper aims to explore distribution pattern of medicinal plants and their uses for the local communities. We have explained here 12 medicinal plants with their identification and medicinal uses.

**Methods:** The plants were surveyed through the direct visit in a different interval of time after that plant was identified.

**Results:** 12 species were described as their medicinal value with identifying Characters. The knowledge of medicinal which provide the potential use for local communities.

**Conclusions:** The Knowledge of the medicinal plant gives people as community as proper uses about the medicinal, herbs shrubs and tree. Due to this, we must preserve the plant as for future generation.

**Keywords:** Distribution, Identify character, Local community, Medicinal plant, Survey

## INTRODUCTION

Kathmandu is situated in elevation about 1,310 meters. The valley is a warm, temperate zone which has a mild climate, subtropical climate, summer temperature average between 19°C to 27°C., and in winter, 2°C to 20°C. Average rain fall during monsoon between June and August 20 cm to 37 cm.

The use of plant s and plant product medicine could be traced a far back of the beginning of the human civilization. The earlier culture of medicinal plant found in “Rigveda”, which is written between the 4500-1600 BC, and supposed as oldest knowledge in human. The special of eight drugs of science of life and arts of healing.<sup>1</sup> Paudel et al describe the *Valeriana jatamansi*,

*Cinnmomum tamala* are the threatened habituated due to the degradation of overuse.<sup>2</sup> About 90% of the population in Nepal depends upon the local healer and Ayurvedic medicinal treatment, as they are less expensive and easily available, Beside these medicinal plants are export commodities and source of national income.<sup>3</sup> The screening of the 50 medicinal plant was done by which shows the linear concentration and optical density, highly increase malic acid and citric acids.<sup>4</sup> The plant is used and surveyed 74 species as herbal immediate.<sup>5</sup>

The main objective of the study is exploration of medicinal plant from Kathmandu valley which have the critical scientific examination as providing detail knowledge about the medicinal plants with their valuable use for local community.

## METHODS

The plant were surveyed through the direct visit in different interval of time, after that Photograph were taken by the camera used Canon IXUS 220 HS made in Japan. For Identification of the plant, Various Monograph, Journal and Tribhuvan University, Central Herbarium. The plant describe as their medicinal value with family identification. The figure plates were prepared through the Photoshop (CS6) without modification.

## RESULTS

### *Acorus calamus L. (Araceae)*

Roots contain latex, petiole with sheathing base, inflorescence in the form of spadix bristle like wings, anther versatile (Figure 1A).

*Medicinal uses:* Rhizomes are used to cure piles, epilepsy, and heart disease, used as insecticides.

### *Cinnamomum tamala (Buch.-Ham.) Nees & Eberm (Lauraceae)*

Mostly evergreen trees, Bark and foliage usually aromatic, perianth tube usually persisting as a cupule at base of fruit (Figure 1B).

*Medicinal uses:* Treatment of bad odor from mouth, black spots on the face, dental caries, swelling, cough and in complications of tuberculosis.

### *Cyathea spinulosa Wall. ex Hook. (Cyathaceae)*

Plants terrestrial, large or medium sized apically scaly stem, stems with dictyosteles, sori superficial (abaxial) or terminal on veins and marginal or submarginal (Figure 1C).

*Medicinal uses:* Used as hair tonic, sudoriific and aphrodisiac.

### *Justicia adhatoda L. (Acanthaceae)*

Flowers bilabiate with conspicuous bract and bracteoles, petals connate, didynamous, fruits-two valved capsule (Figure 1D).

*Medicinal uses:* Plants, leaves and flowers are used in tuberculosis, chronic bronchitis, asthma, and inflammatory.

### *Mentha arvensis L. (Labiatae)*

Leaves with oil glands, inflorescence verticillaste, bilabiate corolla (Figure 1E).

*Medicinal uses:* Leaves are aromatic, antispasmodic, carminative, stomachic, stimulant and diuretic.

### *Mahonia napaulensis DC. (Berberidaceae)*

Sepals 6-9, often petaloid, distinct, in 2 or 3 whorls. Petals 6, distinct, flat, hooded, pouched, or spurred; nectary present or absent. Stamens 6, opposite petals; anthers 2-celled, dehiscent by valves or longitudinal silts. style present or absent, sometimes persistent in fruit as a beak. Fruit a berry, capsule, follicle, or utricle (Figure 1F). Seeds 1 to numerous, sometimes arillate.

*Medicinal uses:* Bark and berries are stomachic, fever, and cough, dysentery.



**Figure 1:** A=*Acorus calamus*; B=*Cinnamomum tamala*; C=*Cyathea spinulosa*; D=*Justicia adhatoda*; E=*Mentha arvensis*; F=*Mahonia napaulensis*.

### *Murraya koenigii (L.) Spreng. (Rutaceae)*

Leaves contain oil dots present- strong smell when crushed, petals and sepals 4-5, free or connate (Figure 2A).

*Medicinal uses:* Leaves and roots care piles and blood disorders. Whole plant used as tonic and stomachic, bark and roots are stimulant.

### *Rauvolfia verticillata (Lour.) Baill. (Apocynaceae)*

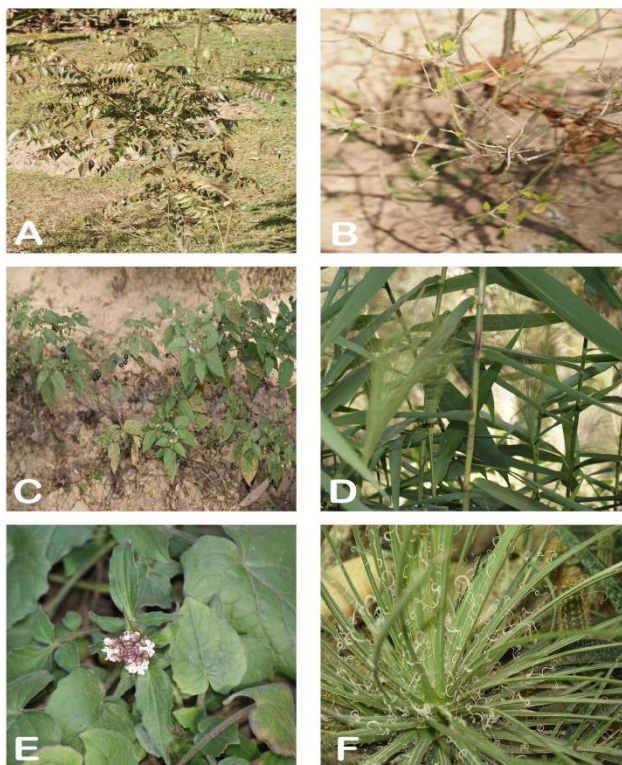
Flower usually salver or funnel shaped, seeds with long sticky hair (Figure 2B).

**Medicinal uses:** Roots and barks used in blood pressure, hypotonic and fever.

***Solanum nigrum L. (Solanaceae)***

Persistent sepals, epipetalous, fruits mostly berry (Figure 2C).

**Medicinal uses:** Whole plants, leaves and berries used to cure cirrhosis of liver, sedative, diuretic and tonic. Used in heart disease.



**Figure 2: A=*Murrya koenigii*; B=*Rauwolfia vericillata*; C=*Solanum nigrum* ; D=*Thysanolaena maxima*; E=*Valeriana jatamanii* ; F=*Yucca sp.***

***Thysanolaena maxima (Roxb.) Kuntze (Poaceae)***

**Inflorescence:** Spike of spikelets, each spikelet is composed of 2-5 flowers. It is enclosed by a pair of bracts called glumes. Flower; bracteates, two bracts palea and lemma enclose flower or floret; lemma contain (Figure 2D).

**Medicinal uses:** Although not of major medicinal importance, a paste made from the roots can be used to treat boils.

***Valeriana jatamansii Jones (Caprifoliaceae)***

Shrubs or woody climbers, rarely small trees or herbs, cymes with a pair of bracts and 2 pairs of bracteoles, located at base of ovaries, paired flowers (Figure 2E).

**Medicinal uses:** Whole plants, leaves and berries used to cure cirrhosis of liver, sedative, diuretic and tonic. Used in heart disease.

***Yucca sp. (Asparagaceae)***

Leaves rarely persistent, leaves with parallel venation, flowers very showy (Figure 2F).

**Medicinal uses:** root and leaves are used for inflammation, pain relieving for arthritic and joint pain.

It is also good for blood purifying and cleaning of the kidneys and liver.

**DISCUSSION**

The some medicinal plant was described by Paudel et al.<sup>2</sup> Plant domestication and management in Nepal is past decades representing and shows that the high altitude plant are the aromatics. The medicinal plant is loss of commercial demands and exceeding supplies due to rapidly increasing population and declining crop productivity, the plant is also lost the harvesting and deforestation. The biochemical activity lost is determined by examine the 19 medicinal plants by Griggs et al.<sup>5</sup> Most of the research was done in *Swertia chirayita*. The plant become conserved as sustainable use.<sup>6,7</sup>

We can conclude that the knowledge of the medicinal plant gives people as community as proper uses, Also the medicinal, herbs shrubs and trees are the potential value for the national income. We must preserve the plant as for future generation. The threatened species need special attention for traditional herbal medicine to be exploit sustainably.

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**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the institutional ethics committee

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