

Original Research Article

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## Documentation of Ethnobotanically Rich, Neglected and Underutilized Wild Edible Species of Kathmandu

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### ABSTRACT

On picturization and trend analysis of declining biodiversity status of Kathmandu Valley because of the intensifying globalization and natural resource utilization, it can be concluded that the present need of the valley is biodiversity conservation and importantly their documentation. In such context, biodiversity conservation and their documentation has become essential. In regards to documentation of biodiversity, 110 medicinal plants collected by the researchers themselves from the Ramkot region of Sitapaila located in Kathmandu valley has been recorded and enlisted in this paper. Some of the major medicinal importance along with quality attributes of the plant species have been presented in this paper.

### Introduction

The term "medical plants" refers to a variety of plants used in herbalism, some of which have medicinal properties. These medicinal plants are thought to be a rich source of components for medication discovery and synthesis. Aside from that, these plants are important in the evolution of human cultures all over the world. Furthermore, some plants are regarded as vital sources of nutrition, and as a result, some plants are suggested for their medicinal properties. Ginger, green tea, walnuts, and a few other plants are among them. Other plants and their derivatives are regarded as key sources of active ingredients for aspirin and

toothpastes (Bassam, 2012). According to IUCN (International Union for Conservation of Nature and Natural Resources) 70% plant species are threatened worldwide, of these 15000 are Medicinal Plants (Schippmann *et al.*, 2006). About 80% of the populations in developing countries rely on medicinal plants to treat diseases, maintaining and improving the lives of their generation (Calixto, 2005).

The people, in most parts of the world particularly in rural areas, rely on traditional medicinal plants' remedies due to easy availability, cultural acceptability, and poor economic conditions. Out of the total 422,000 known angiosperms, more than

50000 are used for medicinal purposes (Hamilton, 2004).

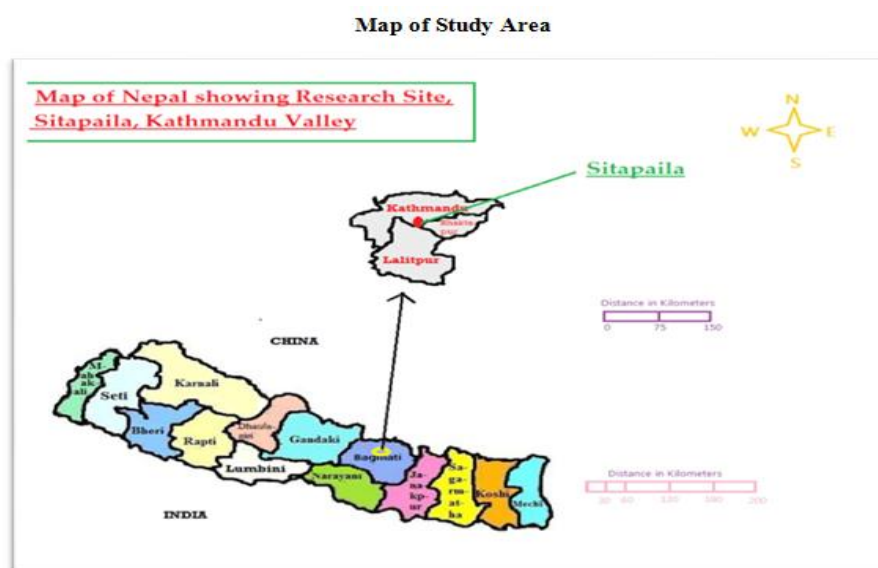
### Geographical Location

The study area is located in the 27.7170° N, 85.2735° E from the center of World Map in the country Nepal at Kathmandu, the capital city of the country.

### Results and Discussion

Hence, Nepal is rich in biodiversity as a lot of flora and fauna is located in Nepal. It is home to a range of huge number of wild species. Since there are 3 ecological belts in Nepal namely; Himalayan belt, Hilly belt and the Terai belt, it provides suitable environment for the sustainability of a lot of species as well.

**Fig.1** Map Showing Sitapaila, the research site



**Table.1** List of Ethnobotanical Plants with their Uses

Scientific name	Local name	Type Plant	Useful part	Beneficial uses	References
<i>Rubus ellipticus</i>	Aiselu	Shrub	Fruit		32, 8, 23 17, 30
<i>Rubus paniculatus</i>	Kalo Aiselu	Shrub	Fruit		23, 30
<i>Dryopteris sps</i>	Ekle Niuro	Herb	Stem as vegetable		24
<i>Aesandra butyraceae</i>	Chiuri	Tree	Fruits	Used in rheumatism	24
<i>Rhus parviflora Roxb.</i>	Sati Bayar	Tree	Fruit		17
<i>Berginia ciliata</i>	Pakhan Bed	Climber	Root & rhizome	Tonic, fever, boils, astringent	5

<i>Aconogonum mole</i>	Thotne	Stem	Root & rhizome	Forest Shoots astringent and eaten relished in the hills as vegetable and pickle. It has similar flavor as their of the Himalayas rubarb.	5
<i>Bauhinia variegata</i>	Koirala	Tree	Bud, Flower	Cure dysentery, diarrhea & stomach pain. The flower buds cure skin disease & ulcer. Fruits are used as blood purifier	5
<i>Citrus indica</i>	Chaksi	Tree	Fruits	Stomach problems	5
<i>Chenopodium album</i>	Bethe	Shrub	Stem and leaves	Appetizer, diuretic, eyediseases, throat troubles, piles, blood heart and spleen diseases.	5
<i>Amaranthus viridis L.</i>	Latte	Herb	Leaves, seeds		24
<i>Dioscorea bulbifora</i>	Githa	Tree	Tuber	Aphrodisiac, stomachic, improves appetite.	5
<i>Juglans regia L</i>	Hade Okhar	Tree	Fruit		24
<i>Juglans regia L</i>	Daate okhar	Tree	Fruit		24
<i>Fapophyrum esculentum</i>	MIthe Phapar	Shrub	Grains	Diet in colic, diarrhea	5
<i>Asparagus racemosus</i>	Kurilo	Woody climber, under shrub	Stem	Diabates, Jaundice, urinary disorder	5
<i>Azadirachta Indica</i>	Neem pati	Tree	Roots, bark, Leaves, flower	As an anti-septic, treatment, prophylactic for mouth	5
<i>Dioscorea alata</i>	Ghar Tarul	Climber	Bark, roots tuber	Washing clothes, to kill lice & fish. Used in contraceptive pills.	5
<i>Dioscorea alata</i>	Seto tarul	Climber	Bark, roots	It is used in fever, leaves in rash and itch and plants in constipation.	5
<i>Dioscorea alata</i>	Nilo Tarul	Climber	Bark, roots	Tubers- anthelmentic useful in leprosy, piles, gonorrhoea.	5
<i>Dioscorea alata</i>	Rato tarul	Climber	Bark, roots	Tubers- anthelmentic useful in leprosy, piles, gonorrhoea.	5
<i>Dioscorea deltoidei</i>	Kukur Tarul	Climber	Bark, roots	Tubers- anthelmentic useful in leprosy, piles, gonorrhoea.	5
<i>Dioscorea alata</i>	Pahelo tarul	Climber	Bark, roots	Tubers- anthelmentic useful in	5

				leprosy, piles, gonorrhoea.	
<i>Berberis aristate</i>	Chutro	Small tree	Root, Bark	Cures jaundice, malaria, fever & diarrhea along with eye diseases.	5
<i>Oxalis corniculata</i>	Chari amilo	Herb		Leaf juice cures dysentery and fever, anemia and appetite.	5
<i>Piper longum</i>	Pipla		Fruit	Alternative tonic; ripe fruits,aromatic, stomachic Carminative	5
<i>Terminalia chebula</i>	Harro	Tree	Fru.		23, 17, 32
<i>Zanthoxylum armatum</i>	Timur	Small tree	veg., spi.		23, 17, 32,30
<i>Fagopyrum esculentum Moench</i>	Phapar	Herb	Seed		24
<i>Castanopsis indica (Roxb. Ex Lindl.) A.Dc.</i>	Katus	Tree	Fruit		23,17,32,30
<i>Ziziphus jujuba</i>	Bayer	Tree	Fruit, Pickle		21
<i>Ziziphus nummularia</i>	Bayar	Tree	Fruit		23
<i>Castanopsis tribuloides (Sm.) A.DC.</i>	Dhale katush	Tree	fru., veg.		8
<i>Terminalia belerica, T. chebula, Emblica officinalis</i>	Triphala	Tree	Fruit, Leaves		5
<i>Curcuma longa</i>	Turmeric	Herb	Rhizome	Antioxidant, anti-inflammatory, antimutagenic, antimicrobial, and anticancer properties	15
<i>Mentha aquatic L.</i>	Mint	Herb	Leaves and young stem	antioxidant, antiallergic, antimicrobial, antiviral, antimycotic, anti- toxigenic, antifungal, anti-parasitical, anti-inflammatory, antiseptic, insecticidal and antitumor	22
<i>Rosmarinus officinalis L.</i>	Rosemary	Herb	Leaves	Antimicrobial, antiproliferative, antitumor	6
<i>Cymbopogon citratus</i>	Lemon grass	Shrub	Leaves and stem	Anti-amoebic, antibacterial, antidiarrheal, anti-filarial, antifungal and anti-inflammatory properties	28
<i>Urtica plaviflora</i>	Sisnu	Herb	Stem and leaves	anti-inflammatory, anti-rheumatic effect, acute diuretic	33

				and hypotensive effect	
<i>Centella asiatica</i>	Ghod tapre	Herb	Leaves	Juice of whole part is mixed with honey and given to treat typhoid and brain tumour. Juice of whole part is mixed with honey and given to treat typhoid and brain tumour. Juice of whole part is given to treat fever, headache and as cooling agent. headache and as cooling agent. Juice of whole part is mixed with honey and given to treat typhoid and brain tumour.	9
<i>Phytolacca acinosa</i> Roxb	Jaringo	Herb	Whole shoot	Reduce pain, aggression, nausea etc. and at the same time stimulates appetite.	14
<i>Cannabis sativus</i>	Ganja	Herb	Leaves, stem, roots	Reduce pain, aggression, nausea, etc and at the same time stimulates appetite.	1
<i>Achyranthes bidentate</i>	Datiwan	Herb	Stem	Juice of root is given to treat anorexia and marasmus.	9
<i>Dioscorea deltoidei</i> Wall.ex Griseb.	Bhyakur	Tree	Fruit	Boiled or burnt tuber or tuber after cooking is given to treat worm infestation.	9
<i>Trichosanthes tricuspidata</i> Lour.,	Indrayani	Herb	Root	Juice of tuber is given to treat gastritis.	5
<i>Cinnamomum tamala</i>	Tejpat	Tree	Leaves and stem	Juice of bark is given to treat stomach pain, gastritis and diarrhea. treat stomach pain, gastritis and diarrhoea ice	5
<i>Dryopteris sps</i>	Tangalide Niuro	Herb	Stem as vegetable		24
<i>Dryopteris sps</i>	Mnolide niuro	Herb	Stem as vegetable		24
<i>Prunus domestica</i>	Aaru bakhada	Tree	Fruit	nutritional, medicinal and cultural values	19
<i>Dendrocalamus hamiltonii</i> Nees & Am.	Tama	Tree	Young stem		24
<i>Arundinaria falcata</i>	Nigalo	Tree	Young stem		24
<i>Prunus persica</i>	Aaru	Tree	Fruit	Leaves are used in the treatment of gastritis, whooping cough, and bronchit	17

<b>Morus alba L.</b>	Kimbu	Tree	Fruit	Beneficial for silkworm rearing, anti-cholesterol, anti-obesity and hepatoprotective effects.	34
<i>Eclipta prostrata</i>	Bhirngi Jhar	Herb	Whole plant	Juice of whole part is given to treat jaundice. Juice of whole part is also applied on cuts to control bleeding. Paste of root or leaf is applied on mud wound.	9
<i>Amaranthus lividus</i>	Lude sag	Herb	Leaf		29
<i>Amaranthus spinosus</i>	Ban lude	Herb	Leaf		29
<i>Amaranthus viridis</i>	Lude sag	Herb	Leaf		29
<i>Mimosa pudica</i>	Lajjawati jhar	Herb	Whole plant	Juice of whole part is given to babies to treat stomach pain.	9
<i>Citrus junos Tanka</i>	Kaade lude	Herb	Fruit		24
<i>Pyruspyrifolia</i>	Naspati	Tree	Fruit		25
<i>Passiflora edulis</i>	Lahare aap	Climber	Seeds		16
<i>Penstemon sour grapes</i>	Sour grapes	Climber	Fruit		7
<i>Ficus carica L.</i>	Anjir	Tree	Seed		31
<i>Citrus jambhiri Lush</i>	Jyamir	Tree	Fruit	Rich source of vitamin C and is used to make pickles.	19
<i>Citrus junos Tanka</i>	Kale Jyamir	Tree	Fruit		15
<i>Prunus armeniaca Linn</i>	Khurpaani	Tree	Fruit	Good edible oil and can be used for industrial purposes.	11
<i>Diospyros kaki</i>	Persimmon	Tree	Fruit	Anti-malignant and anti-melanogenic properties	3
<i>Hippophae sp.</i>	Sea buckthorn	Shrub	Fruit	Cure skin disease and digestive system disorders.	35
<i>Ficus lacor Buch-Ham</i>	Kavro	Tree	Flower	Pickle	24
<i>Diploknema butyraceae (Roxb.) H.j.Lam</i>	Chiuri	Tree	Fruit		32, 8, 17
<i>Ribes nigrum L.</i>	Blackcurrant	Shrub	Fruit	Relieving eosinophilic-driven pulmonary inflammation. Relieving eosinophilic-driven pulmonary inflammation. Relieves pulmonary disorder.	10
<i>Agaricus campestris</i>	Chaitre chyau	Herb	Whole part		24
<i>Amanita muscaria</i>	Rate chyau	Herb	Whole part		24

<i>Melastoma melabathricum L.</i>	Angeri	Shrub	Fruit		24
<i>Glycyrrhiza glabra Linn.</i>	Jethi madhu			Cough, fever, dysentery, chronic	5
<i>Dryopteris sps</i>	Bhadaure niuro	Herb	Stem		24
<i>Smilax ovalifolia Roxb. ex D. Don,</i>	Kukurdaino	Herb	Roots	Juice of root is given to treat marasmus and anorexia.	9
<i>Syzygium cumin</i>	Jaamun	Tree	Fruit		32
<i>Syzygium jambos</i>	Jaamun	Tree	Fruit		8
<i>Cuscutareflexa</i>	Aakashbeli	Total stem parasite	Stem	Antispasmodic, heamodynamic, bradycardia, antisteroidogenic, antihypertensive, antiviral and anticonvulsant activities.	27
<i>Duchesnea indica</i>	Bhui kafal	Herb	Fruit		32
<i>Eriobotrya dubia</i>	Kafal	Tree	Fruit		17
<i>Choerospondias axillaris</i>	Lapsi	Tree	Fruit		8
<i>Coccinia grandis</i>	Golkakri	Climber	Fruit		32
<i>Pyrus pashia Buch.-Ham. ex D.Don</i>	Jure mayal	Tree	Fruit		30
<i>Ficus auriculate</i>	Timila	Tree	Fruit, Vegetable		32
<i>Ficus sarmentosa</i>	Ban Timila	Tree	Fruit, Vegetable		35
<i>Artocarpus heterophyllus</i>	Katahar	Tree	Fruit		29
<i>Cannabis sativa L.</i>	Bhang	Shrub	Fruit		32
<i>Ziziphus incurva Roxb.</i>	Hade Bayer	Tree	Fruit		8
<i>Zizyphus mauritiana</i>	Jangali bayar	Shrub	Fruit		32
<i>Terminalia bellirica</i>	Barro	Tree	Vegetables		32
<i>Tamarindus indica L.</i>	Imili	Tree	Fruit		23
<i>Rhus javanica Miller</i>	Bhakke	Tree	Fruit	Spice	8

	amilo/ Bhakmelo				
<i>Colocasia esculenta</i>	Pidalu	Herb	Whole stem	treat cardiovascular, liver, central nervous system (CNS), digestive, and metabolic disorders.	20
<i>Fagopyrum dibotrys</i>	Ban Phapar	Shrub	Grain	Fruit & Diet in colic, used in lungs	5
<i>Dioscorea bulbifera L.</i>	Ban Tarul	Cimber	Underground stem		24
<i>Aegle marmelos</i>	Bel	Tree	Fruits & leaves		24

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