

## Medicinal Plants and Their Traditional Uses in Ramkot Village, Kathmandu Nepal

Gautam Ratna Silwal

### Abstract

*This study aimed to document the traditional medicinal knowledge of local people of Ramkot village about plants to cure various diseases. Primary data were collected from old aged people of village by using semi structured interview of Key informants. A total of 51 medicinal plants belonging to 38 families and 51 genera were documented to treat different diseases and injuries. The highest (29) number of medicinal plants were herbs and lowest (2) were climbers. Majority of them were used to treat gastrointestinal disorders. The study area was found to be rich in plant resources and the old aged people have ample knowledge on the use of medicinal plants. But young generation is not interested about herbal medicine due to easy access of hospitals and modern medical facilities. Due to lack of proper documentation, conservation and cultivation practices, many useful plant species are at risk of extinction in this village.*

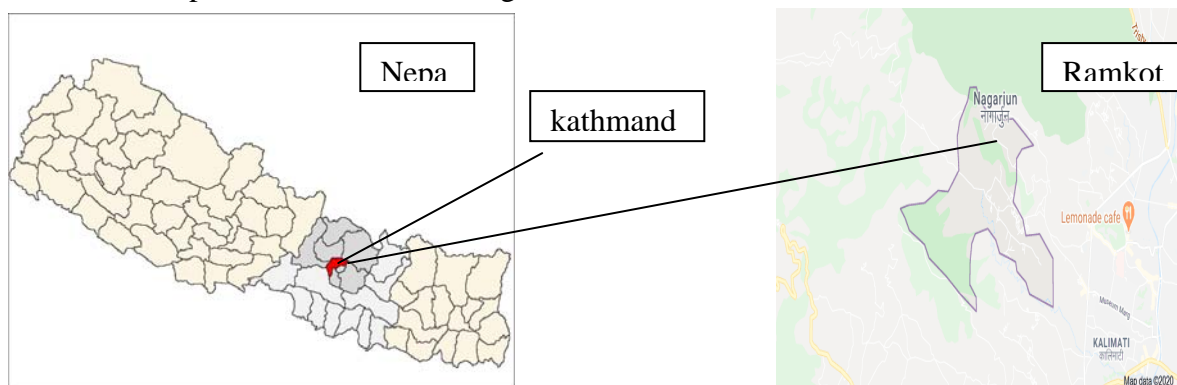
**Key words:** Diseases, Herbs, medicinal plants, conservation

### Introduction

Plants have been used for human benefit from the time immemorial (Summer,2000). Traditional use of plant and plant resources for medicinal purpose has long history in Nepal. The use of medicinal plants in Nepal is as old as human civilization. The earliest evidence of use of plants as medicine is found in Rigveda written between 4500 and 1600 BC (Anonymous, 1970). The rural communities of Nepal heavily depend on the plant diversity for the fulfillment of their basic needs and utilize them according to their traditional knowledge and practice (Joshi *et al*, 2011). Plants having medicinal use are collected from various habitats. At present, most of these habitats with useful species are under threat due to habitat destruction, unsustainable harvesting and over exploitation (Chaudhary, 1998). It has been reported that medicinal plants are responsible for maintaining the health of 70-80% population of Nepal (Manandhar, 2002). Pandey (1961) for the first time reported 73 medicinal and aromatic plants (MAPs) in Nepal. Manandhar (2002) reported more than 900 species of medicinal plants in Nepal. According to MoAD, 2017 rural people in Nepal use at least 1, 463 species of herbal medicines. Shrestha *et al* (2002) reported 1614 species, Baral and Kurmi (2006) reported 1792 species, Ghimire *et al* (2008) reported a total of 1950 species and Rokaya *et al* (2012) reported 1792 to 2331 plant species as potential medicinal and aromatic plants in Nepal. Various researchers have conducted the research to document the ethnomedical knowledge of different communities in Nepal. Acharya and Acharya (2009) documented 45 different plant species belonging to 31 families and 42 genera in

Parroha VDC in Rupandehi district. Majority of them were found as tree treating gastrointestinal disorders, fever, cuts and wounds etc. Joshi *et al.* (2011) found 87 plant species belonging to 54 families in Machhegaun, Kathmandu Nepal. Majority of them were herb and Asteraceae family was found most frequent. Joshi *et al.* (2018) documented 44 medicinal plants belonging to 29 families in Chitwan district. Most of them were used for gastrointestinal disorders. Singh *et al.* (2018) found that the females have better therapeutic knowledge than males because most of the year male members moved away for their livelihood and females deal common ailments at home. Mall *et al.* (2015) found 132 ethnomedicinal plant species belonging to 99 genera and 67 families in Parbat district of Western Nepal. Higher number of plants species were used for gastrointestinal problems. Luitel *et al.* (2014) found 161 ethnomedicinal plant species belonging to 86 families and 144 genera used by Tamang community in Makwanpur district, central Nepal. Majority of them were herbs treating gastrointestinal diseases followed by cuts and wounds. Adhikari *et al.* (2019) found 105 medicinal plants belonging to 58 families and 99 genera. The highest number of plants was used for gastrointestinal disorders. Acharya (2012) found 161 ethnomedicinal plant species belonging to 87 families and 144 genera. Majority of them were herb.

Ramkot lies in Nagarjun Municipality about 7 Km west from the heart of Kathmandu. It is boarded by Suychar, Ichanghu, Sitapaila and Bhimdhunga villages. Formerly it was Ramkot VDC of Kathmandu district. According to 1991 census the population of Ramkot village is 5327 and the total household is 972. Ramkot is inhabited by various ethnic groups like Newar, Sanyasi, Bramhin, Chhetri, Tamang and Muslims. Druk Amitabh mountain with biggest Buddha stupa all over Nepal is one of its centre of attraction. Ramkot was name to signify that Lord Ram was here during his exile. According to legends defines the Lord Ram built a building to keep his weapons. This study is designed to document the medicinal plants in the Ramkot village. It also aims to document the traditional knowledge regarding the medicinal plants found in this village.



Source: [www.google.com.np](http://www.google.com.np)

## Materials and methods

The primary data were obtained during field visits and interview with the 25 key informants of age 50 and above. The secondary data were obtained from Nagarjun municipality office, Ramkot ward office, and different literatures, national and international journals. Field visit was carried out during June-July 2019. The plant materials were identified with the help of experts and herbarium specimens deposited in Botany department, Patan Multiple Campus. The collected data were tabulated and analysed with the help of Microsoft Excel 2010.

## Results and Discussions

The study documented a total of 51 species of commonly used medicinal plants in the area which was represented by 38 families and 51 general (Table 1). The majority species were herbs (29 species), followed by shrubs (12 species), trees (8 species) and climbers (2 species) (Figure 1). The families with the highest number of species were Asteraceae (5 species) and Amaranthaceae (3 species). The families Berberidaceae, Apiaceae, Poaceae, Solanaceae, Urticaceae, Ericaceae, Lamiaceae and Araceae were represented by two species each while remaining 27 families constitute single species only (Figure 2). The highest numbers of plants were used for gastro intestinal disorder (12 species) followed by cuts and wounds (9 species) and fever (6 species) (Figure 3). In terms of plant parts use, Whole parts, underground parts, leaves, twigs and barks were in top priorities (Figure 4). Most of the documented medicinal parts were Angiosperm (55 species dicots & 5 species monocots) and one species Pteridophytes. The study shows more or less similar results with Acharya and Acharya, 2009 (Tharu community, Rupandehi district), Acharya, 2012 (Magar community, Gulmi district), Adhikari *et al.*, 2019 (Machhapuchhre Rural Municipality, Kaski district), Luitel *et al.*, 2014 (Tamang community, Makwanpur district), Joshi *et al.* 2018 (Chitwan district), Joshi *et al.*, 2011 (Machhegaoun village, Kathmandu) and Shrestha *et al.*, 2016 (Eastern Nepal).

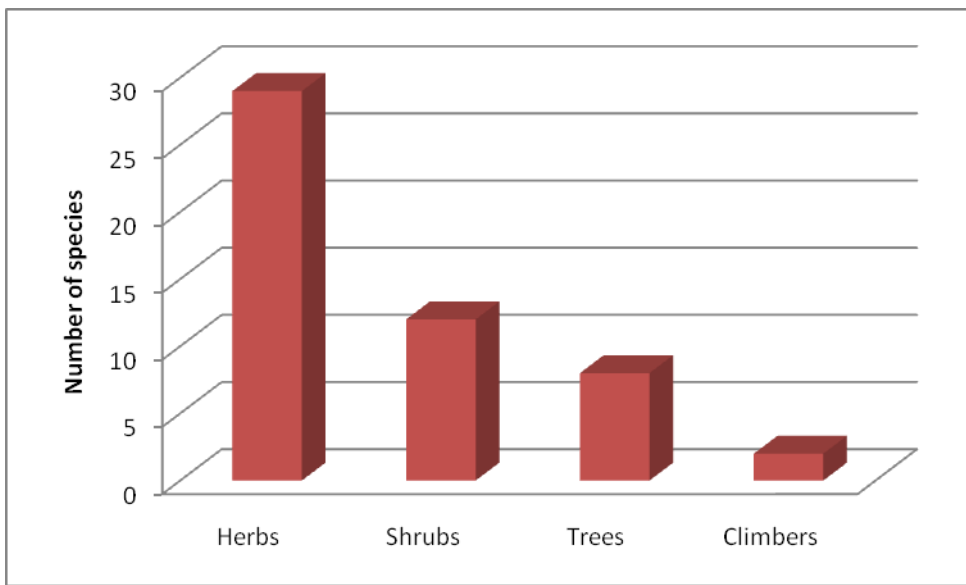


Figure 1. Habits of plants

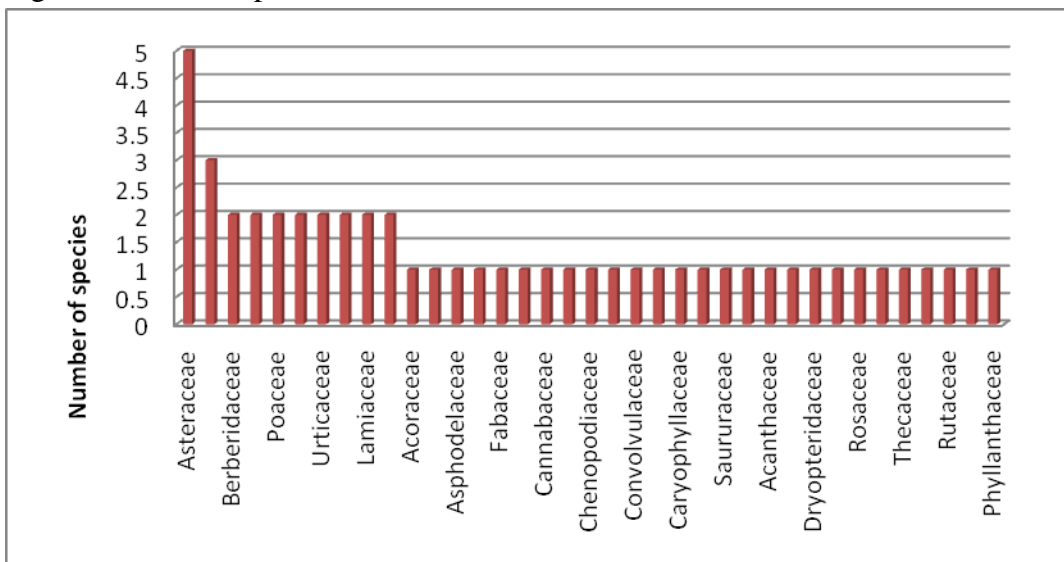


Figure 2. family wise distribution of plant species

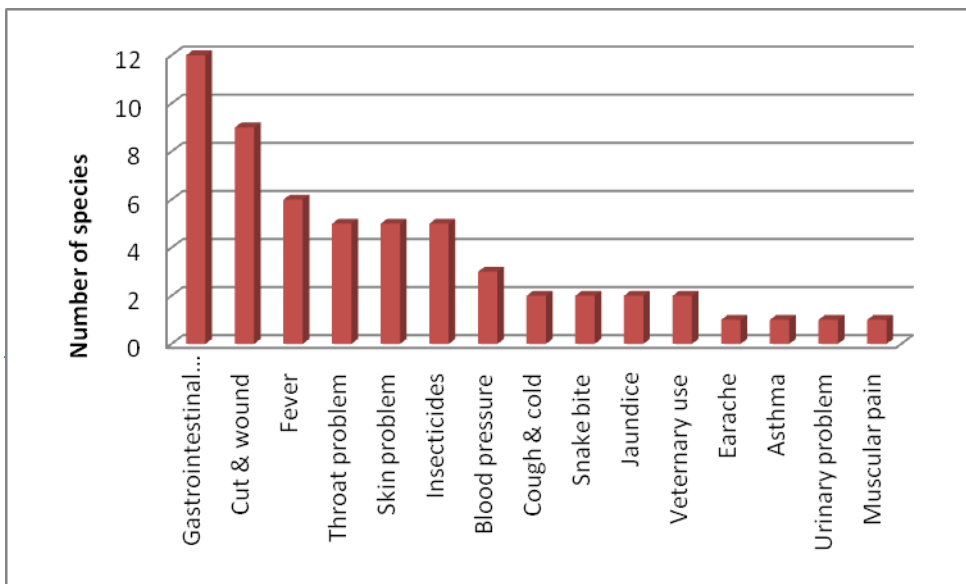


Figure 3. Plants used in various health problems

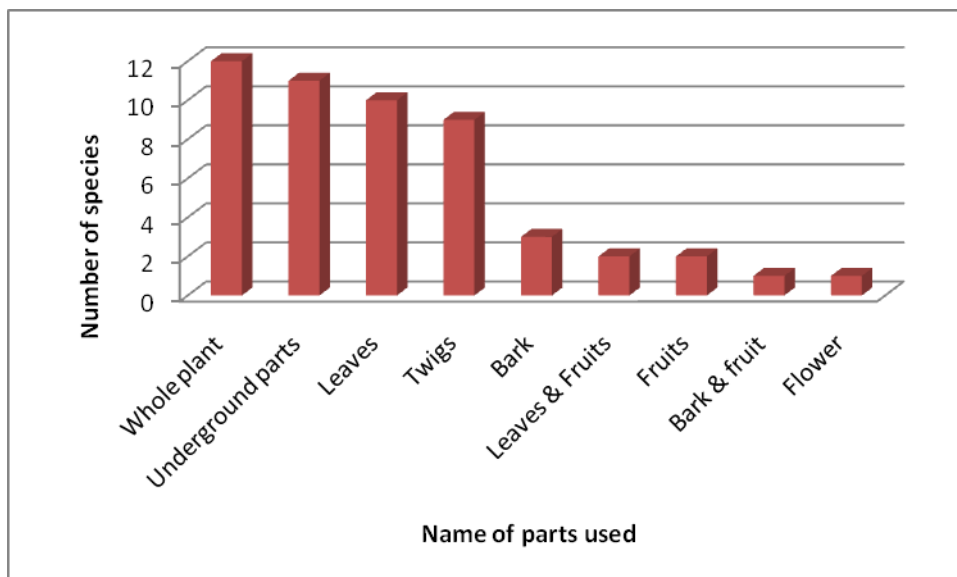


Figure 4. Parts used in the treatment of various health problems

Table 1. List of medicinal plants documented in Ramkot village area

S.no	Scientific name	Local name	Family	Habit	Medicinal uses
1	<i>Achyranthus bidentata</i> Blume	Datiwan	Amaranthaceae	Herb	Leaf juice is used for typhoid stem is used in toothache.
2	<i>Acorus calamus</i> L.	Bojho	Acoraceae	Herb	Rhizome is chewed to cure throat problems.
3	<i>Ageratina adenophora</i> (Spreng.) R.M.King & H.Rob.	Kalmunte	Asteraceae	Herb	Leaf and twig juice is used in cuts and wound to stop bleeding.
4	<i>Ageratum conyzoides</i> L.	Gandhe	Asteraceae	Herb	Plant juice is applied in cuts to stop bleeding.
5	<i>Allium wallichii</i> Kunth	Dundu	Alliaceae	Herb	Bulbs are chewed to treat cough and colds.
6	<i>Aloe vera</i> (L.) Burman fil.	Gheu kumara	Asphodelaceae	Herb	Leaf is used to cure burn and skin irritation. Leaf juice is

					taken to lower blood pressure.
7	<i>Alternanthera sessilis</i> (L.) R.Br		Amaranthaceae	Herb	Leaf juices and paste is used in bleeding, cuts and wounds.
8	<i>Amaranthus viridus</i> L.	Latte	Amaranthaceae	Herb	Vegetables and pickles of young twigs are useful to treat constipation.
9	<i>Arisaema tortuosum</i> (Wallich) Schott	Sarpako makai, Banko	Araceae	Herb	Corm paste is applied in snake bite.
10	<i>Artemesia indica</i> Willdenow	Titepati	Asteraceae	Herb	Leaves and twigs are used as insecticides. Dried leaves are burned to repel mosquitoes.
11	<i>Asparagus raceosus</i> Willdenow	Kurilo	Asparagaceae	Shrub	Young twigs are cooked and taken as tonic.
12	<i>Bauhinia variegata</i> L.	Koiralo	Fabaceae	Tree	Bark decoction is used in gastric.
13	<i>Berberis asiatica</i> Roxb.ex de Candolle	Chutro	Berberidaceae	Shrub	The root extract is given to cure jaundice.
14	<i>Buddleja asiatica</i> Loureiro	Bhimsenpati	Buddlejaceae	Tree	Leaf juice is used to cure skin diseases.
15	<i>Cannabis sativa</i> L.	Bhang, Ganja	Cannabaceae	Shrub	Fresh twigs are given to cattle to treat diarrhoea.
16	<i>Celtis australis</i> L.	Khari	Ulmaceae	Tree	The paste of plant is used to cure muscular pain.
17	<i>Centella asiatica</i> L.	Ghodtapre	Apiaceae	Herb	Plant juice is used to treat jaundice and high blood pressure.
18	<i>Chenopodium album</i> L.	Bethe	Chenopodiaceae	Herb	Vegetables and pickles are made and taken as

					anthelmintic.
19	<i>Colacasia esculenta</i> (L.) Schott	Karkalo	Araceae	Herb	Vegetable is useful in constipation.
20	<i>Cirsium verutum</i> (D.Don) Sprengel	Thakal	Asteraceae	Herb	Fresh root and young shoot is chewed in throat pain.
21	<i>Cissampelos pareira</i> L.	Batulo paat	Menispermaceae	Climber	Tuber is crushed and paste is given increase milk production of domestic animals.
22	<i>Cuscuta reflexa</i> Roxb.	Aakash beli	Convolvulaceae	Climber	Plant juice is used in jaundice and high blood pressure.
23	<i>Cynodon dactylon</i> (L.) Persoon	Dubo	Poaceae	Herb	Plant juice is used in burning sensation, cuts and wounds.
24	<i>Cynoglossum zeylanicum</i> Thung.	Kanike kuro	Boraginaceae	Herb	Leaf juice is used to control bleeding in cuts and wounds.
25	<i>Datura stramonium</i> L.	Dhaturo	Solanaceae	Shrub	Grinded seeds mixed with honey are used treat asthma. Leaf juice is dropped in ear to treat earache.
26	<i>Drymaria villosai</i> Chamisso & Schl.	Abijalo	Caryophyllaceae	Herb	Plant juice is used in urine infection.
27	<i>Eclipta prostrata</i> L.	Bhringaraj	Asteraceae	Herb	Plant paste is used in cuts and wounds.
28	<i>Ficus reliogosa</i> L.	Pipal	Moraceae	Tree	Bark juice is used to treat dysentery, diarrhea and is also useful in snakebite.

29	<i>Gonostegia hirta</i> (Blume) Miq.	Maslahari	Urtticaceae	Herb	The plant paste is applied in muscle crack.
30	<i>Houttuynia chordata</i> Thunberg	Gandhe jhar	Saururaceae	Herb	Pickles of whole plant are given to relief from body pain.
31	<i>Hydrocotyl sybthorpoidea</i> Lam.	Sano ghodtapre	Apiaceae	Herb	Plant juice is to treat fever. The plant paste is applied in cuts and wounds.
32	<i>Jasminum humile</i> L.	Sano jai	Oleaceae	Shrub	Leaves juice is given to treat fever. Fresh leaves are chewed to treat sore throat and tonsil.
33	<i>Justicia adhatoda</i> L.	Asuro	Acanthaceae	Shrub	Leaf juice is used to cure malaria, bronchitis and cough.
34	<i>Lindera neesiana</i> Kurz	Siltimur	Lauraceae	Shrub	Seeds are taken with salt and turmeric powder to cure gastritis.
35	<i>Lyonia ovalifolia</i> (Wallich) Drude	Seto aangeri	Ericaceae	tree	Bark paste is used to treat scabies.
36	<i>Mahonia nepaulensis</i> Candolle	Jamane mandro	Berberidaceae	Shrub	Leaf juice is useful in mouth ulcer and tonsil.
37	<i>Mentha spicata</i> L.	Bawari	Lamiaceae	Shrub	Leaf juice is useful in dysentery and gastritis.
38	<i>Nephrolepis cordifolia</i> (L.) K. presl	Pani amala	Dryopteridaceae	Herb	Tuber juice is useful in dehydration.
39	<i>Ocimum tenuiflorum</i> L.	Tulsi	Lamiaceae	Herb	Leaf juice is used in cold and cough. It also used to cure skin diseases.



40	<i>Phyllanthus emblica</i> L.	Amala	Phyllanthaceae	Tree	Bark juice is used in dysentery, fruit is tonic and used in shore throat.
41	<i>Plantago erosa</i> Wallich	Esapgol	Plantaginaceae	Herb	Leaf paste is used in insect bites.
42	<i>Rhododendron arboretum</i> Sm.	Laligurans	Ericaceae	Tree	Fresh or dry petals are useful to treat dysentery. Dry petals are chewed to extract the fish bone or wheat splinter stuck in throat.
43	<i>Rubus ellipticus</i> Sm.	Ainselu	Rosaceae	Shrub	Root juice is given for fever, diarrhea and dysentery.
44	<i>Rumex nepalensis</i> Spreng.	Halhale	Polygonaceae	herb	Root paste is used to control blood in cuts and wounds.
45	<i>Schima wallichii</i>	Chilaune	Thecaceae	Tree	Bark paste is used to control bleeding from cuts and wounds.
46	<i>Solanum nigrum</i> L.	Kaligedi	Solanaceae	Herb	Ripe fruits used in constipation.
47	<i>Thysanolaena latifolia</i> (Roxb.Ex) Hormen	Amriso	Poaceae	Herb	Root decoction is taken in oral form during fever.
48	<i>Urtica dioica</i> L.	Sisnoo	Urticaceae	Shrub	The young twigs are cooked and taken as good source of iron.
49	<i>Valeriana jatamansi</i> Jones	Sugandhawala	Valereianace	Herb	Plant juice is used as insecticidal.
50	<i>Zanthoxulum armatum</i> de Candolle	Timur	Rutaceae	Shrub	Leaves and seeds are used as insecticides. Few

					seeds are taken with warm water to get relief from indigestion.
51	<i>Zingiber officinalae</i> Roscoe	Aduwa	Zingiberaceae	Herb	Rhizome decoction is used in vomiting, common cold and stomachache.

## Conclusion

The present study shows that the Ramkot village is rich in medicinal plants. The older people of the village have greater knowledge about the locally available medicinal plants and their uses but teenagers show no interest for the use of medicinal plants. The reason behind this is easy availability of allopathic medicines. The practice of using medicinal plants is decreasing day by day as consequences the traditional knowledge about the use of medicinal plants is going to be extinct along with older generation. So emphasis should be given and documentation should be done to preserve the traditional knowledge before they have been lost.

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