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Medicinal Plants Used By Traditional Healers In The Vicinity Of Village Guret, District Una, Himachal Pradesh

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ABSTRACT
The study was conducted in the Guret village of Una district, Himachal Pradesh. The information was recorded on the plant species available in the study area using by the local people for curing various ailments and diseases .The study documented a total no of 50 plant species of 44 genera belonging to 32 families .Among the families, Euphorbiaceae and Moraceae (5 each) represented the maximum number of species. Leaves were the most frequently used plant parts recorded from 50 plant species to cure ailments .Plants used by local people were tabulated in alphabetical order of botanical name ,local name ,family and part used. The largest number of 18 species were used to treat infection ,16 for diabetic ,14 for digestive problems ,11 plant species each were used for the treatment of respiratory problems and for boil and wound, 10 plant species were used for the antidotes, 8 plant species each for female diseases and cancer problems ,7 plant species each weree used for weakness and 2 for birth control . Majority of the local peoples trusts traditional system for their health care needs, therefore we aimed to document the indigenous uses as well as traditional practices of some important medicinal plants of Una district, Himachal Pradesh.

Key words: *Medicinal plant, Traditional healers, Diseases, Local people, Guret village Una district.*

I. INTRODUCTION

Since time immemorial, medicinal plants have been incessantly used in traditional systems of medicine. The health care system based on plants dates back to Vedic era and instinct, intuition as well as the accumulated knowledge during the course of time, has guided the humanity to discover remedies for common ailments from natural sources. The indigenous systems of medicine namely Ayurveda, Siddha, and Unani have been in existence for several centuries. These systems of medicine cater to the needs of nearly seventy percent of our population residing in the villages. However, our knowledge of medicinal plants has been inherited traditionally. Spreading and preserving this knowledge on medicinal and aromatic plants and their uses has become more important for human existence today in the wake of epidemics and dreaded diseases like cancer, AIDS (Acquired Immune Deficiency Syndrome), SARS (Severe Acute Respiratory Syndrome), gastroenteritis, heart ailments, asthma, arthritis, etc. Plants of medicinal importance are the treasure houses for meeting our future needs and will also help in unraveling elements which will form the basis of new knowledge and technology. According to WHO, 1977 "a medicinal plant" is any plant, which is one or more of its organ contains substances that can be used for the therapeutic purposes or which are precursors for the synthesis of useful drugs. The term "herbal drug" determines the part/parts of a plant (leaves, flowers, seeds, roots, barks, stem, etc.) used for preparing medicines (Anonymous, 2007a). In the Indian Himalayan Region the use of medicinal plants is still a tradition continued by local people or ethnic communities. Even today still traditional health care practices hold much potential or most of the people depend upon local flora due to easily approachable to their habitat. Utilization of plants for medicinal purposes in India has been documented long back in ancient literature (Charak and Drdhbala, 1996).Himachal Pradesh is one of hilly state comprises a good heritage of ethno botanical flora and natural wealth. Approximately 500 species of medicinal and 150 species of aromatic plants have been reported from the state. It represents quite a high percentage out of the 3500 recorded plant species in Himachal Pradesh (Chauhan,1999). Comparatively ,information pertaining to ethno botanical use of plants is scanty for study area , except studies Carried out by few workers i.e. Ramchand et al.,2016 ,Sharma .B .,2016 and Monica et.al.,2017,Bhardwaj and Seth M k. 2017.The indigenous knowledge regarding the use of medicinal plants of the study area is rapidly deckling Therefore, the documentation of plant resources is a necessary step towards the goal of raising awareness in local communities about the importance of these plants and their future conservation .Hence an attempt has been made to document the traditional uses of plants from Guret village ,district Una, Himachal Pradesh.

II. MATERIAL AND METHODS

STUDY AREA

Himachal Pradesh is located in the northern part of the Himalayas. It is a small state in both size and population but holds rich floral and faunal wealth. State has 12 districts and the study area falls in Una district. Una lies in the southwestern part of Himachal Pradesh, with the beautiful Shivalik hills of the Himalayas gently rolling on one side. Una has a latitude of 31°28°34°N and a longitude of 76°16'13°E. The Satluj river passes alongside Shahtalai hills, known for the shrine of Baba Balak Nath. The altitudes vary from more than 350 meters in city Una to over 1000 meters in Chintpurni. Una district is bounded by the river Beas on the north and the river Satluj in the east. The district has a geographical area of 1540sq.kms, out of total area of 55,673sq.kms. of Himachal Pradesh. It covers 2.8% area of the state. Guret is a medium size village located in Amb Tehsil of Una district, Himachal Pradesh. It comes under Kinnu Panchayat. It is located in India at the longitude of 76.11 and latitude of 31.67. The village located 40KM towards North from District headquarter Una , 10KM from Amb and 144 KM from State Capital Shimla. The total population of Guret village is about 256 in which 139 are males while 117 are females as per population census 2011.

Fig 1: Map showing location of Himachal Pradesh in India

Fig 2 : Location of Una district in Himachal Pradesh

III. METHODOLOGY

The field survey was conducted in order to explore ethno botanical diversity and importance of local plants harnessing for medicinal purposes by the local people of Guret village, district Una, Himachal Pradesh. Data was collected through personal interviews. The information regarding the traditional knowledge local name, part used, mode of administration within the study area was recorded through the intensive interviews and discussion with elderly people. Identification of plants along the search path was done with the help of local people. Then, the plant specimen were collected by their local names. The plants were identified with the help of herbaria, floras and manuals on Himalayas and Himachal Pradesh. Identification of the collected specimens was also done by using standard flora written by researchers available at the library of Himachal Pradesh University (HPU), Shimla. The medicinal and other uses for these plants were also recorded from the available literature in books and journals. The secondary information has been collected from published as well as unpublished sources. Some study materials has been referred from websites also.

IV. RESULT AND DISCUSSION

India has a rich heritage of using plants as a medicines and Indian system of medicines utilizes 80% of the material derived out of plants. Floral diversity is one of the major resources that fulfill the basic needs of the rural population. Plants have been used since long to heal and cure diseases. It was found that medicinal plants of this region are main source of primary health care. Majority of elder persons had sound knowledge of medicinal plants and use of these plants in their daily life, while younger generations lack this. These plants are used in the forms of decoction, juice, powder, paste and whole plant extract. In the present study 50 plant species belonging to 44 genera and 32 families were documented. Across family-wise distribution, Euphorbiaceae and Moraceae (05 species each) was the most dominant family followed by Fabaceae and Combertaceae (03 species each); Rutaceae; Meliaceae; Apocynaceae, Menispermaceae, Lamiaceae and Solanaceae (02 species each) and the rest of the families are represented by one species each (Fig.4).

However, of the total recorded plants revealed as trees contributed the major proportion (44%) followed by herbs (30%), shrubs (18%), climber (6%) and fern (2%) (Fig. 3). It was observed that most utilized

plant parts are Leaves (15) recorded from 50 plant species to cure ailments followed by other components viz; Roots (13); Fruits (10); Stem (10); Whole Plant (06); Seed and Bark (05) (Fig.5). Plants used by local were tabulated in alphabetical order of botanical names, local names, family, growth habit and part used shown below in Table-1. The study presents a brief account of the uses of various medicinal plants against the diseases i.e. infections, anti-diabetic, respiratory, aphrodisiacs, female diseases, birth control, weakness and anti-cancerous by the people of Guret village of district Una. The largest number of 18 plant species were used for the treatment of infection, sixteen species were used to treat diabetes, fourteen species were used for digestive problems, respiratory problems, boil and wounds were treated by eleven-eleven species each, ten plant species were used for antidotes, eight plant species each were used for female diseases and anti-cancerous, seven-seven species each were used for Aphrodisiacs and for the treatment of dental diseases, four plant species for weakness and two for birth control explained in table-2.

Because of varied altitudinal gradients and climatic condition, the state harbours rich plant diversity, which includes around 3400 species of flowering plants (Uniyal and Chauhan, 1972). Due to increased demand for pharmaceutical industries and various other factors, many important plant species are under threat and even same are at the edge of extinction (Kumar, 2014; Meena et. al., 2009; Rawat et. al., 2013). A vast knowledge of how to use the plants against different illness may be expected to have accumulated in areas where the use of plants is still of great importance (Diallo et. al., 1999). *Azadirachta indica* was found to have the highest diversity of medicinal uses (used for the treatment of 6 different ailments) and was described to treat diabetic potential, female diseases, birth control, boil and wounds, dental diseases, etc. (Hassan-Adballah et.al., 2013) also described these uses of *Azadirachta indica.* Comparison of the pharmacological literature published from different countries with the present ethno-botanical data showed that many of plants have earlier been reported to have activities against specific diseases example include Balu et. al., 1999 also recorded *Aegle marmelos* are used in the treatment of diabetes in Tamilnadu. Similarly people also use herbal contraceptive to control fertility and prevent pregnancy there by checking the population.

Table No. 1: Systematic list of medicinal plant species with their Botanical names, Local Names, Families, Growth Habit and Part used.

Sr. No.	Botanical Names	Local Names	Family	Growth Habitat	Part Used
1	*Abrus precatiorius*	Rakta	Fabaceae	Shrub	Root
2	*Acacia catechu*	Khair	Mimosaceae	Tree	Root
3	*Achyranthes aspera*	Puthkanda	Amaranthaceae	Herb	Whole Plant
4	*Adhatoda vasica*	Basuti	Acanthaceae	Shrub	Leaves and Root
5	*Aegle marmelos*	Bel	Rutaceae	Tree	Fruit
6	*Aloe barbadensis*	Kwareya, Aloevera	Asphodelaceae	Herb	Leaves
7	*Anacyclus pyrethrum*	Karkra	Asteraceae	Herb	Root
8	*Azadirachta indica*	Neem	Meliaceae	Tree	Whole Plant
9	*Bauhinia variegata*	Karal, Orchid tree	Fabaceae	Tree	Leaves and Root
10	*Bombax ceiba*	Simbal	Malvaceae	Tree	Whole Plant
11	*Bryonopsis laciniosa*	Shivlingi	Cucurbitaceae	Herb	Seeds
12	*Bryophyllum pinnatum*	Patharchaat	Crassulaceae	Herb	Leaves
13	*Calotropis gigantea*	Aak	Apocynaceae	Shrub	Stem

14	*Cannabis sativa*	Bhaang, Hemp plant	Cannabinaceae	Herb	Whole Plant
15	*Carissa carandas*	Garna	Apocynaceae	Shrub	Fruit
16	*Cassia fistula*	Halindi	Fabaceae	Tree	Root & Bark
17	*Cissampelos pareira*	Batindu	Menispermaceae	Climber	Leaves
18	*Cuscuta reflexa*	Aakashbel	Convolvulaceae	Climber	Stem
19	*Cynodon dactylon*	Dhoob	Poaceae	Herb	Whole Plant
20	*Emblica officinalis*	Amla	Phyllanthaceae	Tree	Fruit
21	*Euphorbia helioscopia*	Dudhli	Euphorbiaceae	Herb	Root & stem
22	*Ficus benghalensis*	Bad	Moraceae	Tree	Flower & leaves
23	*Ficus carica*	Pakuda, Fig tree	Moraceae	Tree	Fruit
24	*Ficus racemose*	Tyamal	Moraceae	Tree	Root
25	*Ficus religiosa*	Peepal	Moraceae	Tree	Stem & bark
26	*Jatropha curcas*	Jablota	Euphorbiaceae	Shrub	Seeds
27	*Matteuccia struthioreris*	Rungru	Aspidaceae	Fern	Stem
28	*Melia azedarach*	Daek	Meliaceae	Tree	Leaves & bark
29	*Mentha longifolia*	Pudina, Mint plant	Lamiaceae	Herb	Leaves
30	*Mallotus philippensis*	Kaml	Euphorbiaceae	Tree	Stem
31	*Moringa oleifera*	Sunane	Moringaceae	Tree	Seeds
32	*Morus alba*	Toot	Moraceae	Tree	Leaves & fruit
33	*Murraya koenigi*	Gandhla	Rutaceae	Tree	Root ,leaves & bark
34	*Ocimum sanctum*	Tulsi	Labiateae	Herb	Whole Plant
35	*Opuntia ficus-indica*	Shitershoo	Cactaceae	Shrub	Stem & flower
36	*Oxalis corniculata*	Khatti ambi	Oxalidaceae	Herb	Leaves
37	*Phyllanthus niruri*	Bhoomi amla	Euphorbiaceae	Herb	Root
38	*Pinus roxburghii*	Chil, Chir pine	Pinaceae	Tree	Seeds & leaves
39	*Pogostemon benghalensis*	Kaali basuti	Lamiaceae	Herb	Root
40	*Riccinus communis*	Erand	Euphorbiaceae	Shrub	Seeds

41	*Rubus ellipticus*	Aakhe (Rusberry)	Rosaceae	Shrub	Fruit
42	*Solanum nigrum*	Mako	Solanaceae	Herb	Leaves
43	*Syzygium cumini*	Jamun	Myrtaceae	Tree	Leaves & fruit
44	*Terminalia bellirica*	Behra	Combretaceae	Tree	Fruit
45	*Terminalia chebula*	Harad	Combretaceae	Tree	Fruit
46	*Terminalia arjuna*	Arjun	Combretaceae	Tree	Bark , leaves & fruit
47	*Tinospora cordifolia*	Gloe	Menispermaceae	Climber	Stem
48	*Viola odorata*	Banaksha	Violaceae	Herb	Flower & root
49	Vitex negundo	Bana	Verbenaceae	Tree	Stem
50	*Withania somnifera*	Ashwagandha	Solanaceae	Shrub	Root

Table No. 2: No. of medicinal plant species against various diseases from the collected plant species.

Sr. No.	**Diseases**	**No. of plants species**
1	Infection	18
2	Anti-diabetic	16
3	Digestive	14
4	Respiratory	11
5	Boil and wound	11
6	Antidotes	10
7	Female diseases	8
8	Anti-cancerous	8
10	Dental diseases	7
11	Weakness	4
12	Birth Control	2

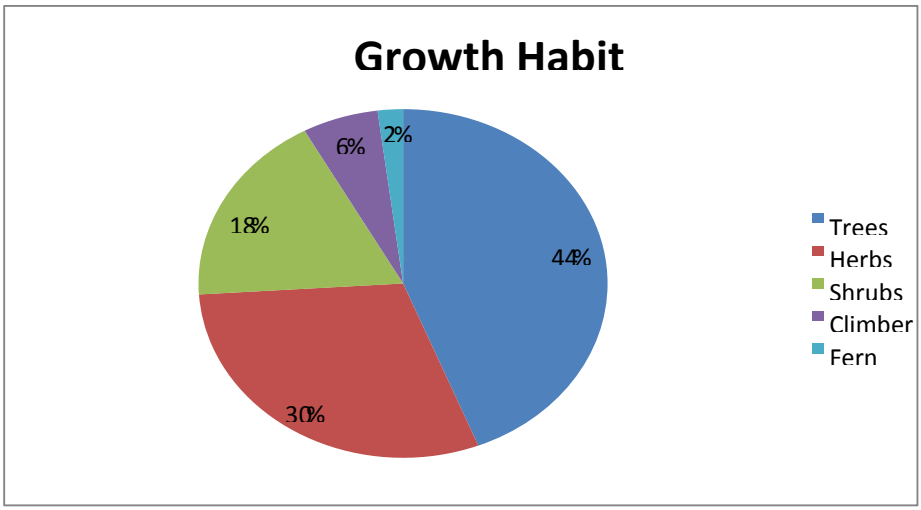

Fig. 3: Percentage Representation of Growth Habit

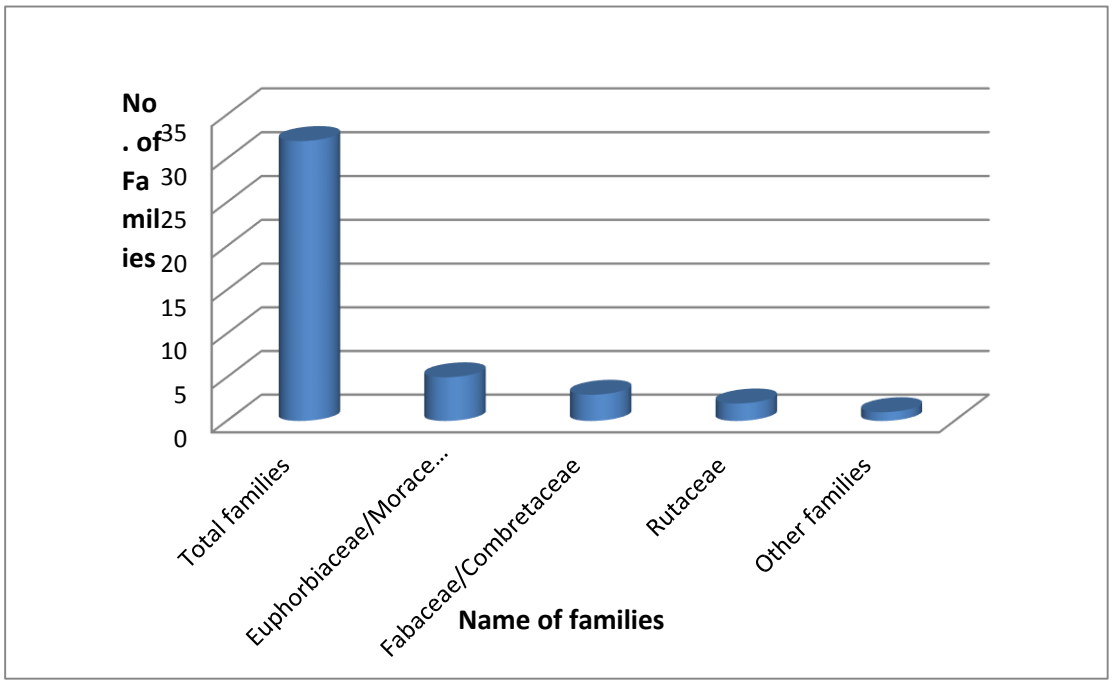

Fig. 4: Dominant families of medicinal plants recorded in study area

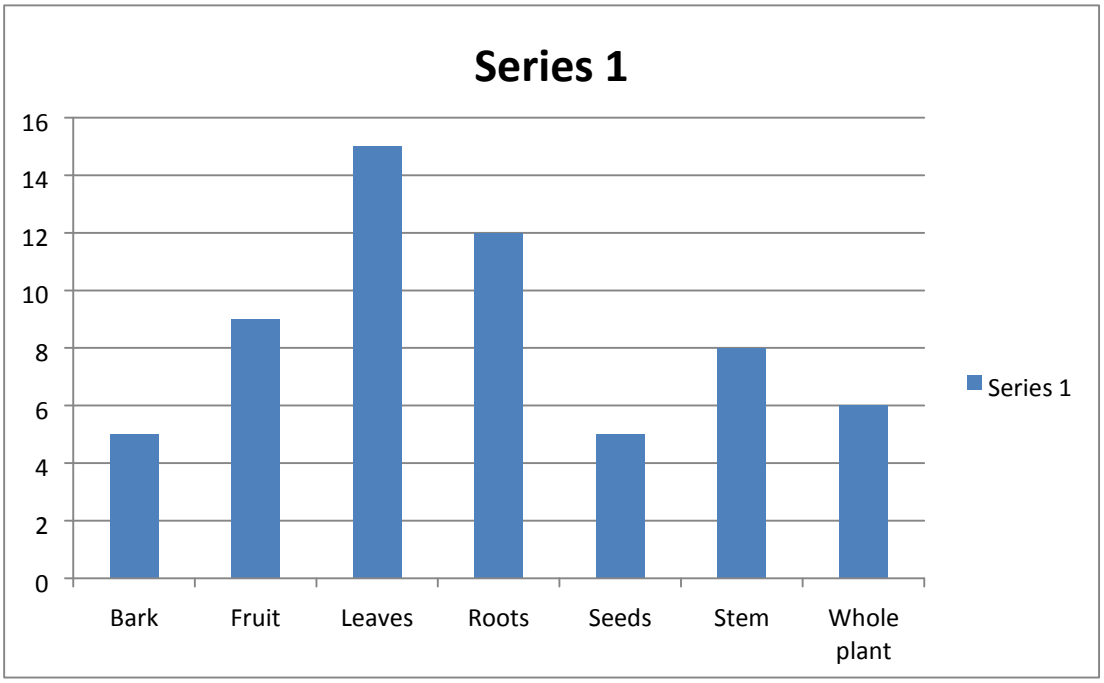

Fig. 5: Number of plant parts used as medicine.

PHOTOGRAPHS OF MEDICINAL PLANTS


Abrus precatiorius


Acacia catechu


Achyranthes aspera


Adhatoda vasica


Aegle marmelos


Aloe barbadensis


Anacyclus pyrethrum


Azadirachta indica


Bauhinia variegata

Bombax ceiba

Brynopsis laciniosa

Bryophyllum pinnatum

Calotropis gigantea

Cannabis sativa

Carissa carandas

Cassia fistula

Cissampelos pareira

Cuscuta reflexa

Cynodon dactylon

Euphorbia helioscopia

Ficus benghalensis

Ficus carica

Ficus racemose

Ficus religiosa

Jatropha curcas

Matteuccia struthioreris

Melia azedarach

Mentha longifolia

Mollotus philippensis

Moringa oleifera

Morus alba

Murraya koenigi

Ocimum sanctum

Opuntia ficus-indica

Oxalis corniculata

Phyllanthus emblica

Phyllanthus niruri

Pinus roxburghii

Pogostemon benghalensis

Riccinus communis

Rubus ellipticus

Salonum nigrum

Syzygium cumini

Terminal bellirica

Terminal chebula

Terminalia arjuna

Tinospora cordifolia

Viola odorata

Vitex negundo

Withania somnifera

V. CONCLUSION

The aim of present study is to provide information about the medicinally important floral diversity of Guret village district Una. This ethnobotanical and traditional knowledge contributes to the conservation of biodiversity and provides ecological interest. Plants have been used for health and medicinal purpose for several thousands of years. In olden days folklore based ethnobotanical knowledge has been used widely to treat disease. The people belonging to rural communities still use medicinal herbs for the treatment of common health problems. A total of 50 plant species belonging to 44 genera and 32 families were recorded from the study area. Euphorbiaceae and Moraceae contributed to maximum plant species. The plant part used were leaves, roots, fruits, stem, bark, seeds, etc. The recorded medicinal plants used in the treatment of various types of ailments like infections, anti-diabetic, aphrodisiacs, female diseases, respiratory, antidotes, for cut and wounds, digestive, anti-cancerous, dental problems, etc. by the people of Guret village of district Una.

This study shows that the Guret area of Una district is rich with valuable medicinal flora and traditional knowledge seems confined to elderly people while younger generation is ignorant about the vast medicinal resources available in their surroundings. This knowledge passed orally from one generation to another but not documented as such. The recorded medicinal plants are highly valuable for various medicinal uses. Parts of these plants may be assessed pharmacological point of view for its effective utilization. The information on therapeutic use of plants may provide a great potential for promoting awareness among the people to use them. Thus, the present study not only highlights the use of plants but also focuses on future conservation which provides leads for the betterment of human society.

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