



**A STUDY OF SOME LOCALLY AVAILABLE HERBAL MEDICINES  
FOR THE TREATMENT OF VARIOUS AILMENTS IN BANDIPORA  
DISTRICT OF J&K, INDIA.**

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**ABSTRACT**

Bandipora district is one of the 22 districts in Jammu and Kashmir state that was carved out from the erstwhile Baramulla district on 02-04-2007. The local people of the district have always used medicinal plants for the treatment of various ailments by traditional methods. Utilization of medicinal plants especially by tribal communities is directly linked to their culture and history. There are many villages that are repositories of indigenous knowledge and practices. Documentation of such knowledge is required in view of the day by day disappearing knowledge in the new generations. Therefore, in the present study an attempt has been made to document some locally available plants utilized traditionally by the inhabitants of this district. A total of 30 plant species belonging to 19 different families were reported used traditionally by the inhabitants. Study of this type would help developing a comprehensive database of the plants used in household remedies, strengthening the health care system in the villages and also in conserving the traditional knowledge for prosperity.

**KEY WORDS:** Herbal medicine, ailments, Bandipora, tribals, indigenous knowledge.



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## INTRODUCTION

In the contemporary global milieu, the documentation of the biological resources and the associated indigenous knowledge existing within a country has assumed highest priority. Medicinal plants are highly esteemed all over the world as a rich source of therapeutic agents for the prevention of diseases and ailments. From the earliest days of civilization mankind has turned to plants for healing a tradition that has survived the arrival of modern medicine and found new strength at the end of 20th century<sup>1</sup>. Plants have played a vital role in the treatment of diseases since prehistoric times and are one of the most important areas of research in the world today. India and China are two of the largest countries in Asia which have the richest arrays of registered and relatively well known medicinal plants<sup>2</sup>. India endowed with a rich wealth of medicinal plants is unique in that these plants are used by all sections of people either directly as folk remedies or in different indigenous systems of medicine or indirectly in the pharmaceutical preparations of modern medicine. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different Indian systems of medicines such as Ayurveda, Unani and Siddha<sup>3</sup>. Rigveda and Atharveda which dates back to 2000-1000 BC and several post Vedic treatise, viz. Charakasamhita (100 AD), Sushruthasamhitha (100-800 AD), Dhanwanthari Nighantu (1200 AD), are the important ancient sources of information on medicinal plants<sup>4</sup>.

Indigenous knowledge simply refers to health practices, knowledge and beliefs incorporating plant based remedies, spiritual therapies, manual techniques and exercises, applied singly or in combination to treat, diagnose and prevent illnesses or maintain well being<sup>5</sup>. It is as old as human civilization. The scientific study of how the people of a particular culture and region make use of indigenous plants is called Ethnobotany (From "ethno"-study of culture and "botany"-study of plants.)-while the ethnobotanist explores how plants are used for food, shelter, medicine, clothing, hunting and religious

ceremonies. It is the relationship between a given society and its environment and in particular the plant world<sup>6</sup>. The term ethnobotany was first coined by an American botanist John William Harshberger in 1895. He defined ethnobotany as the study of plants used by the primitive and aboriginal people<sup>7</sup>. The natural flora and fauna used by the specific group in the form of medicine in curing and preventing different ailments and diseases are known as ethnomedicine<sup>8</sup>. Ethnomedicine refers to the study of traditional medical practice which is concerned with the cultural interpretation of health, diseases and illness and also addresses the health care seeking process and healing practices<sup>9</sup>. The ethnomedical approach proves useful particularly for the study of indigenous therapeutic agents because it allows the researcher to understand treatment patterns according to native explanatory models instead of only through the lens of biomedicine.

Medicinal plants are a valuable natural resource and regarded as potentially safe drugs. They have been playing an important role in alleviating human sufferings by contributing herbal medicines in the primary health care systems of rural and remote areas where more than 70% of the population depends on folklore and traditional systems of medicines. The reason for their popularity is due to the high cost and side effects of allopathic medicines. The state of Jammu and Kashmir, cradled in the lap of Himalayas has been recognized as heaven on earth and is also called the "Biomass" state of India. This area which is located in the far north of the Indian Republic has a diverse variety of plant species especially ethnomedicinally important plants due to wide variations in its topography and microclimatic conditions. Many studies have been carried out to document the indigenous knowledge information of the medicinal plants from different areas of the region<sup>10-19</sup>. Bandipora district is one of the 10 districts of Kashmir in northern India with a geographical area of 398 Sq.km's. The District is located on the northern bank of the Wular Lake-

the largest fresh water lake in Asia. Bandipora, the District headquarter, is about 55 kms from Srinagar (summer capital) and is accessible by road as well as by river Jehlum. The District lies 34° 64' N latitude and 74° 96' E longitude and is situated at an average height of 1701 meters above mean sea level (AMSL). Most of area of the District is hilly terrain and is bounded in the west by district Kupwara, in the South-east by district Ganderbal and in the east by district Kargil, Baramulla in the south and on the north side it is bounded by LOC (Line of Control). The climate of the District has its own peculiarities. The seasons are marked by sudden change and the climate can be divided into six seasons of two months each. These include, Spring (16 March to 15 May), Summer (16 May to 15 July), Rainy Season (16 July to 15 September), Autumn (16 September to 15 November), Winter (16 November to 15 January) and Ice Cold (16 January 15 March). All these seasons are locally called as Sont, Retkol, Waharat, Harud, Wandh and Shishur respectively. The winters are usually harsh due to heavy snowfall and low temperatures. During the months of December, January, February and March the precipitation occurs mostly in the form of snow, which starts melting in March, when the percentage of relative humidity is fairly high. Each part of the district experiences snowfall during winter. The district is divided into three tehsils namely Bandipora, Gureiz and Sonawari (Fig. 1.). The district is topographically very rich in forest and ground vegetation including the medicinally important plants. Since, least documented information is available about the traditional medicinal plant knowledge of this floristically rich area<sup>20,21,13</sup>, in the present study an attempt has been made to document some locally available plants (herbal medicines) utilized traditionally by the people of Bandipora district for the treatment of various ailments .

## MATERIALS AND METHODS

During the investigation, frequent field trips and plant collections were made from various regions

of the study area from March 2012 to November 2012. Methods used to document the traditional knowledge included interviews and discussions with local knowledgeable persons, herbal healers called "*Bhoris*" and Tribals (*Gujjars* and *Bakerwals*). During surveys a total of about 63 informants were consulted who were between the ages of 37-98 years among whom most enjoyed a respectable status in the community. A questionnaire was devised to identify the indigenous knowledge of plant based remedies from local people. Informants were asked questions in Kashmiri language that was understandable in most of the cases. However, Urdu language (official language of J&K) was also used in tribal areas. In order to provide independent information, informants were separately asked to share their traditional knowledge on the utilization of medicinal plants such as the local name, plant part used, ailment(s) in which plant part used and mode of administration. The method of field work followed was after<sup>22-24</sup>. With the view to bring an element of accuracy, the information was cross-checked with that of others. From the natural habitats, plants were collected in their flowering and fruiting stages as far as possible. Field photographs of the plants were taken for easy identification and habitat recognition. Collected plants were dried, pressed, preserved (poisoned) and finally mounted on herbarium sheets following standard herbarium techniques. Plant specimens were then identified and accessioned from the KASH Herbarium of Kashmir University, Srinagar (J&K), where one copy of every specimen was deposited for authenticity and future use. Apart from it, for identification, help was also sought from the Department of Botany, Government Degree College Baramulla, Kashmir. Available floristic literature<sup>25-31</sup> and various publications dealing with the flora of temperate regions were also consulted. Finally one more copy of every specimen was deposited in the herbarium section of the Department of Botany, Government Narmada Post Graduate College, Hoshangabad (M.P), India for authenticity and future use.

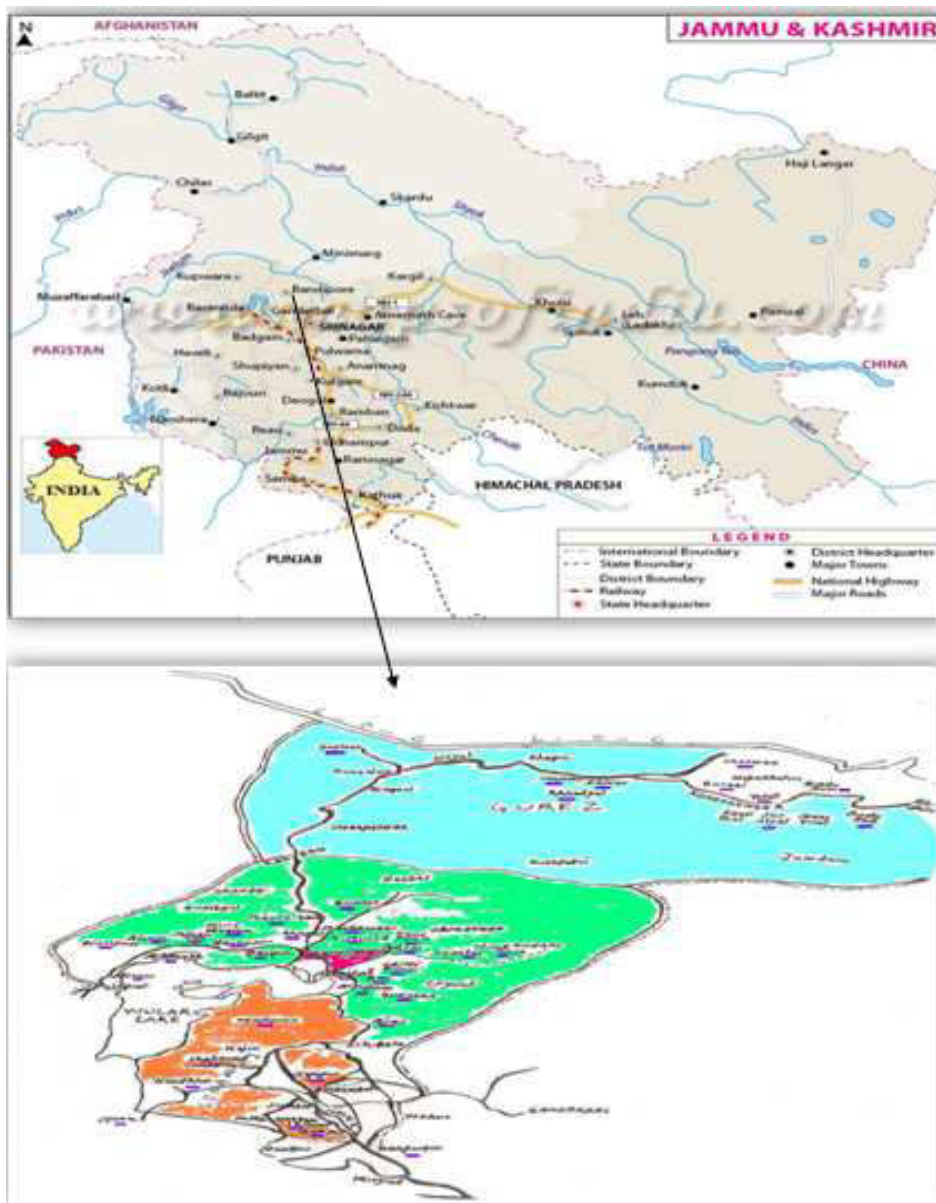


Figure 1: Map of District Bandipora.

## RESULTS AND DISCUSSION

Life and diseases go together, where there is a life, diseases are bound to exist. Traditional uses of plant remedies provide potential indicators for biological activities. In the last few decades, there is a resurgence of public interest in medicinal plants and their role in primary health care<sup>32</sup>. Alternative medicine using herbal mixtures is becoming more popular as these are

believed to be safer and natural. However, there still exists an immense gap between the local traditional knowledge and modern medical sciences. This has resulted in the development of research priorities on plants used in traditional medicine to provide sufficient important information for commercialization. According to WHO, about three quarters of the

world population relies upon traditional medicines made from herbs for their health care. At a global level, traditional medicine is now increasingly becoming essential part of the medicinal curriculum and it is anticipated that the modern physicians who are also skilled with some alternate methods of treatment are likely to be more successful physicians in the years to come<sup>33</sup>. Thus there is a huge potential of medicinal plants in health care not only in remote areas of developing countries but also in the industrialized world and the acceptance of botanicals in modern medicines is likely to increase in future. During ethnomedicinal survey of Bandipora district, a total of 30 plant species belonging to 19 different families were found to be used as effective remedies by the local people in their day to day life to treat and cure various ailments. The highest number of medicinal plants were recorded in two families viz. Asteraceae (6 species) and Apiaceae (4 species) followed by families Cucurbitaceae, Rosaceae, Nymphaeaceae (2 species each) while all other families included only one species. Most of the collected plants were herbs<sup>34</sup>. While on the basis of the plant parts used, it was observed that the maximum plant species (31%) were found to be used as various parts such as leaves, flowers, seeds, barks, rhizomes, thorns, stolens and fruits etc. followed by whole plants (24%), fruits (17%), seeds (14%), leaves (7% each), bulb (4%) and roots (3%) to cure various ailments (Table 1 & Fig. 2). Most of the combinations for remedies were prepared from a single species; however some applications were always prepared with a mixture of plants. Medicines were used in different forms including powder, paste, poultice, decoction, juice and infusion. In our study paste was found to be used more often followed by decoction, poultice, infusion, powder, juice and latex. For the preparation of indigenous medicines, the people of the area always collected plants that were fresh and best in all respects i.e., disease free<sup>35,36</sup>. Medicinal uses of certain locally available plants being used in the treatment of various ailments prevalent in the area are given in table-2 below,

mentioning plant's botanical name, local name, family, habit, accession number and their ethnomedicinal uses, including plant part used, ailments in which part of the plant used and mode of administration. Results also show that the people of Bandipora district used these plants through different modes of preparation for curing various ailments such as rheumatism, chilblains, urinary disorders, jaundice, indigestion, cough, general body weakness, gaseous bloat, fever, cold, headache, hair fall, warts, skin infections etc.<sup>37,19,13</sup> Herbal medicines were not only used for the treatment of diseases in humans but also in case of domesticated animals. The choice of use for herbs was noticed to be influenced by many factors such as season of the year and knowledge of other species. Beside, results also reveal that a major proportion (75%) of folk medicinal knowledge comes from people above the age of 55 years, while a small proportion (25%) of it comes from people between the ages of 37 and 50<sup>38</sup>. Discussions and interviews with both old and young people and *Bhoris* indicated that the attitude of the younger generation was not towards continuing this traditional medicine system because they realized less opportunity in this tradition for getting immediate benefits mainly in terms of cash in the form of money.

During surveys, ethnomedicinal data was gathered by consulting people of different ethnic groups such as *Gujjars*, *Bakerwals*, *Bhoris* and also some knowledgeable persons of the plains. *Gujjars* are generally permanent settlers in the foot hills of Himalayas. Besides breeding their own livestock, they also take care of the animals of other communities, fulfilling the role of village cowherd. *Bakerwals* constitute nomadic tribe and high altitude goatherds/shepherds who lead a lonely and tough life in the high altitude meadows of the Himalayas and Pir Panjal ranges<sup>39</sup>. While interacting with the *Bakerwals* it was found that they actually belonged to flung Rajouri and Poonch districts of J&K and visited the study area every year in the months of April and May. Every year, they take their livestock animals

high into the mountains, above the tree line to graze in the lush meadows. They travel by foot and it takes them more than thirty days to reach these meadows. During the summer, they move from one meadow to another and ultimately leave the district in the months of August and September. They are accompanied by their dogs to guard the sheep/goats and their pack animals. Some of them have settled permanently in the foothills of the Himalayas of the district. For example, a few could be easily found near Saderkoot Bala area, living there for years. Both of these ethnic groups (*Gujjars* and *Bakerwals*) have their own knowledge of traditional herbal medicine inherited from their fore-fathers. These medicines are well accepted by the local people since generations have experienced their efficacy in alleviating a variety of diseases<sup>34</sup>. Besides, these ethnic groups have to rely on the traditional system as they do not have the modern medicinal facilities available in the vicinity.

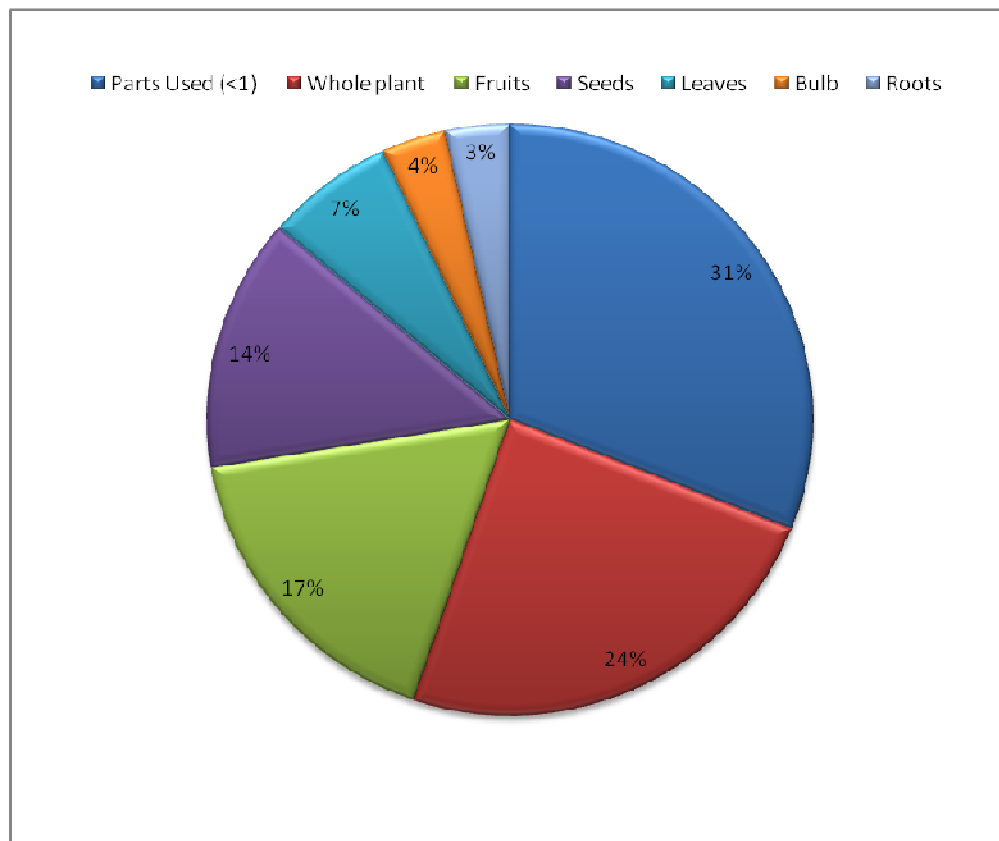
Traditionally, *Bhoris* are the practitioners of this indigenous medicine system. Earlier, in the study area, *Bhoris* were mainly the Kashmiri Pandiths who had vast deep rooted knowledge of prescribing the patients by traditional herbal medicine. This knowledge was descended to them from their forefathers in the form of oral folklores, and is not yet documented. But due to uprising turmoil that started in 1989 in the valley, they left the district in order to defend themselves and migrated along with this precious knowledge to other parts of the state as well as country. This is the reason that a few

abandoned shops that belonged to them were reported during the course of survey in the main market of Bandipora. Till they stayed in the district they shared their precious medicinal knowledge with some Kashmiri Muslims among whom a few at present are carrying forward and practicing this profession. The people who sell them herbal medicine in return get a little money to sustain their basic needs of livelihood. The low cost of herbal medicine and its unlikely income is one of the reasons that youth of *Bhoris* are now discouraged from carrying forward this profession and that is why only few *Bhoris* were found in the study area. On the other hand, the cost of modern medicine is very higher than the cost of indigenous medicine so there is public demand for services<sup>40</sup>.

The availability of medicinal plants is not only drastically decreasing due to various reasons such as increased marketing pressure, lack of job opportunities, developmental works, increased population of the area, over-grazing by animals and indiscriminate harvesting by unskilled gatherers but also the existing traditional medicinal knowledge of these plants is depleting at an alarming rate. Therefore, it is high time that a feasible conservation strategy and action plan should be formulated and implemented effectively in order to save this high value dwindling resource. For sustainable and long term conservation of these plant species it would be better to involve the local people through creating awareness among them as they are the best judges of the area

**Table 1**  
***Plant parts used to cure various ailments.***

Plant part used	Parts used (>1)	Whole plant	Fruits	Seeds	Leaves	Bulbs	Roots
No. of plant species	9	7	5	4	2	1	1
% of plant parts used	31	24	17	14	7	4	3



**Figure 2**  
*Plant parts used to cure various ailments.*

**Table-2**  
**Some locally available medicinal plants of Bandipora District (J & K) and their uses to cure various ailments based on information gathered by using questionnaire, discussions and field trips.**

BOTANICAL NAME/ LOCAL NAME/ FAMILY	HABIT/ ACCESSION NUMBER	PLANT PART USED	AILMENTS	MODE OF ADMINISTRATION
<i>Adiantum venustum</i> D.Don. Kakbai (Pteridaceae)	Perennial evergreen fern/39283	Whole plant	Cough, jaundice, stomach ailments, headache, fever, body muscular pains and hair fall.	Black stalks are used as tooth sticks to clean teeth. Dried fronds are crushed to obtain powder. Powder is added to a glass of water and kept as such overnight. The extract is given next day early in the morning for the treatment of cough, jaundice and stomach ailments. The herb forms an important ingredient of a combination of several different herbs such as whole plants of <i>Cotula anthemoides</i> , leaves of <i>Ocimum basilicum</i> and leaves and flowers of <i>Prunella vulgaris</i> . This combination, locally called "Lossa Ghasa" is thoroughly boiled in water to prepare hot water extract. Ladies, after their deliveries, are advised to have bath with this hot water extract (after dilution with more water) to cure headache, fever, body muscular pains and hair fall.
<i>Aesculus indica</i> (Wall. ex Camb.) Hook. (Haandoon) (Hippocastanaceae)	Perennial tree /38865	Fruits	Chilblain, joint pains, boils, skin rashes, eruptions, headache, burns, wounds and rat killer.	Fruits after crushing are boiled in water to prepare hot water extract which is used to wash feet against chilblain, a painful itching swelling caused by exposure to cold which is locally called "Shuh". Fruit powder is mixed with mustard oil to make paste. The resultant paste is used to cure joint pains, boils, skin rashes, eruptions and headache by its external massage. Sometimes dried fruits are burnt to get ash which is mixed with oil and honey to make paste. Paste is then applied on burns and wounds to stimulate their healing. Dried fruit pieces are mixed with the kernels of <i>Juglans regia</i> and mustard oil. The resultant mixture serves as a best home remedy for killing rats. Crushed fruits are mixed with crushed onion bulbs and common salt to make small soft balls which are given to cattle during severe cold to keep them healthy.
<i>Allium cepa</i> Linn. Gundh (Liliaceae)	Annual herb /38877	Bulb	Loss of appetite, acidity, impotency, cold, anorexia, frothy bloot and flow of tears.	Small thin slices of bulb are mixed with local mint, common salt and curd and given against loss of appetite and stomach acidity. Slices are also placed in water for overnight. The same water is taken next day early in the morning on empty stomach to strengthen male potency. A mixture of crushed bulbs and common salt is made into balls. These balls are widely used as a traditional household remedy for cattle against cold, anorexia and in cows to stimulate the oestrus cycle. Balls are also given to horses to cure the frothy bloot which is caused due to the grazing of Batakunt ( <i>Trifolium repens</i> ). A small piece of bulb is placed on top of the ear to prevent the flow of tears from eyes while cutting onions.
<i>Amaranthus retroflexus</i> Linn. Ganhaar (Amaranthaceae)	Annual herb /38904	Whole plant	Measles and dandruff.	Children suffering from measles are advised to inhale smell that emanates from roasting dried seeds. Seeds once roasted are mixed with gur (local sugar) and made into small balls. Balls are given to the same children to treat measles. Plant is burnt to get ash which is locally called "Suzz". It is gently applied on scalp and then washed with water to clean the hair and check dandruff.
<i>Anagallis arvensis</i> Linn. Chari-saban (Primulaceae)	Annual herb /38906	Whole plant.	Skin itches	Fresh herb is crushed to obtain juice which is applied on hands and arms and then washed with water to cure skin itches with dry bran like eruptions.
<i>Brassica oleracea var. haka</i> Linn. Hakh (Brassicaceae)	Biennial herb /38852	Leaves	Corns and constipation.	Leaves are taken as vegetable. Fresh leaf is gently placed in warm mustard oil with haldi and salt till it becomes soft. It is then tightly tied with muslin cloth on painful corns of toes and fingers which helps them to ripe, burst and evacuate the pus and hence to alleviate the pain. The petiole of the leaf after peeling off the rind is placed in the rectum of the new born baby as a best home remedy to cure constipation.



<i>Bunium persicum</i> (Bioss.) Fedtsch. Kala Zeera (Apiaceae)	Perennial herb /38872	Fruits	Digestive disorders, foul breath, joint pain, lumbago and weak memory.	Dried fruits are used as spice in case of digestive disorders. Fruits are chewed to remove foul breath. Roasted fruits are ground into powder which is mixed with banana to make paste. Paste is given orally for the treatment of joint pain, lumbago and as brain tonic to enhance memory.
<i>Calendula officinalis</i> Linn. Hamesh Bahar (Asteraceae)	Annual herb /38884	Leaves and flowers	Boils, burns, eyelid abscesses and pneumonia.	Leaves and flowers are crushed and paste is made by mixing with cow butter. Paste is then applied on boils, burns and abscesses of eye lids to give relief from pain. Poultice is made by crushing of fresh leaves and flowers which is slightly warmed and then spread on a cloth and tied on chest to cure pneumonia in children.
<i>Centaurea iberica</i> Trevir. ex Spreng. Krech (Asteraceae)	Perennial herb /38830	Leaves and thorns	Burns, skin rashes, eye vision and defective lactation.	Thorns are burnt to get ash which is mixed with cow butter to make paste. Paste is applied on burns and skin rashes for their treatment. Fresh leaves after crushing are mixed with egg and then cooked to prepare omelette. Latter is given to improve the eye vision. It is also given to enhance lactation in females.
<i>Cichorium intybus</i> Linn. Kasni/Wari Hundh (Asteraceae)	Perennial herb /38913	Leaves	Body weakness, loosening of joints, body muscular pains, frequent bleeding, loss of appetite and liver problems.	Leaves are cooked and given to fresh mothers to cure body weakness, loosening of joints, body muscular pains, frequent bleeding and as appetizer and liver tonic.
<i>Conyza canadensis</i> (Linn.) Cronquist. Shallut (Asteraceae)	Annual herb /38834	Aerial portion	Indigestion, dysentery, stomach gases, internal injuries, fever and cough.	Aerial portion of the plant is crushed and made into small soft balls which are given to cattle for immediate relief from indigestion and dysentery. Fresh leaves are eaten to cause cooling effect, cure stomach gases and internal injuries. Leaf decoction with sugar is given to cure fever and cough.
<i>Coriandrum sativum</i> Linn. Daniwaaal (Apiaceae)	Annual herb /38833	Seeds	Fever, palpitation of heart, jaundice, drying of mouth and headache.	Dried seeds are put in cold water at least for one hour. Cold sponging is done by dipping a clean cotton cloth in this cold water and applying it to the chest, head and feet to relieve fever and palpitation of heart. Seed decoction is given to cure jaundice, drying of mouth and headache.
<i>Cucumis sativus</i> Linn. Laer (Cucurbitaceae)	Annual climbing herb. /38903	Fruits and seeds	Headache, fever, stomach heatup, kidney stones and burning sensation of urine.	Fruit slices are consumed as salad. Proximal end of the fruit is sliced. The resultant slice is rubbed on rest of the fruit for about 2-3 minutes so that white foam comes out of it. The slice along with this foam is kept as poultice on forehead to cause cooling effect and to relieve headache and fever. Dried seeds along with the dried seeds of <i>Lagenaria siceraria</i> and <i>Cucumis melo</i> are put in a glass of cold water as such for overnight. Thus a composite infusion is made which is given to cure stomach heatup, kidney stones and burning sensation of urine.
<i>Cydonia oblonga</i> Mill. Bumchuont (Rosaceae)	Perennial tree /38886	Seeds, fruits and flowers.	Constipation, birth problems, jaundice, cough, cold, chronic constipation, fever, dysentery, blood purifier, asthma, chest problems, general body weakness and body muscular pains.	Seed infusion is given to pregnant women against constipation and to loosen body parts so as to facilitate the normal delivery. The seeds also form an important ingredient of a combination of different herbs such as seeds of <i>Cucumis sativa</i> , <i>Malva neglecta</i> , <i>Foeniculum vulgare</i> , fruits of <i>Zizyphus jujuba</i> , leaves and flowers of <i>Arnebia benthamii</i> and fronds of <i>Adiantum capillus-veneris</i> . This combination is locally called as "Sharbeth". The composite decoction of "Sherbeth" is given to cure jaundice, cough, cold, chronic constipation, fever and as a good blood purifier. Fruit slices are sun dried, stored for winter season. Slice decoction is administered orally in case of dysentery. Ripe fruits after being coated externally with a thin layer of mud are roasted and then eaten as a best home remedy against asthma, cold, chest problems and general body weakness. Sundried flowers and sugar after mixing are crushed. The same is then kept in air tight jar for about 10-15 days for fermentation. This fermented mixture is locally called "Khambir Bihi". It is given to cure cough, cold, asthma and body muscular pains.
<i>Daucus carota</i> Linn. Moharmunj Ghasa	Biennial herb /39277	Roots	Dysuria, digestive disorders and fatigue.	Roots at juvenile stage are considered highly energetic and are consumed raw by the local livestock grazers while travelling long distances by foot to give relief from painful and difficult urination,

(Apiaceae)				digestive disorders and fatigue.
<i>Euphorbia helioscopia</i> Linn. Gur-Sochal (Euphorbiaceae)	Annual herb /38868	Aerial portion	Skin eruptions, warts, arthritic pain, indigestion, worms and constipation.	White coloured latex obtained from the herb is used to cure skin eruptions and warts by its external application. Poultice made by crushing of aerial portion of the plant is applied on arthritic joints to stimulate the formation of blisters. The blisters later on burst releasing the fluid which in turn alleviates the arthritic pain. Leaf decoction is taken against indigestion, worms and constipation.
<i>Euryale ferox</i> Salisb. Jumar/Kena bub (Nymphaeaceae)	Annual herb /38854	Seeds	Stomach problems, whooping cough, semen deficiency and weak libido.	Dried seeds are considered highly energetic and are eaten against stomach problems, whooping cough, semen deficiency and to increase libido. Kashmiri Pandiths considered the seeds as 'sacred' because they used to break their fast by eating the bread prepared from its flour.
<i>Foeniculum vulgare</i> Mill. Bodiyaan (Apiaceae)	Perennial herb /38863	Whole plant	Dyspepsia, acidity, constipation, abdominal pain, Jaundice, cough, cold, chronic constipation, fever, blood purifier and joint pains.	Seeds are eaten to cure dyspepsia, acidity and constipation. In case of abdominal pain and constipation of a small baby, seeds are chewed to make paste which is applied respectively on abdomen and buttocks. Dried seeds form an important ingredient of "Sharbeth". The composite decoction of "Sherbeth" is given to cure jaundice, cough, cold, chronic constipation, fever and also acts as a good blood purifier. Seeds are also eaten to abstain from smoking. Whole plant is burnt to get ash which is mixed with oil to make paste. Paste is then applied on painful joints.
<i>Fumaria indica</i> (Hauskn.) Pugsley Shahtar (Fumariaceae)	Annual herb /38845	Whole plant	Defective eye vision, palpitation of heart, breathing problems, skin diseases, blood purifier, asthma, defective urination with pus, skin rashes, dropsy, menstrual irregularities, male impotency and general body weakness.	Dried plant is grinded and powder is made which is administered orally with water against defective eye vision, palpitation of heart, breathing problems, skin diseases and as good blood purifier. Whole plant decoction is taken to overcome asthma, defective urination with pus, skin rashes, dropsy, menstrual irregularities, male impotency and general body weakness.
<i>Galinsoga parviflora</i> Cav. Marchawagan Ghasa (Asteraceae)	Annual herb /38890	Whole plant	Joint pains	Fresh plants are crushed to make poultice which is tied on painful joints to alleviate pain.
<i>Helianthus annuus</i> Linn. Gulaftab (Asteraceae)	Annual herb /38905	Seeds	Whooping cough and joint pains.	Seeds are chewed and eaten to cure whooping cough. Seed oil is gently warmed and applied on painful joints.
<i>Juglans regia</i> Linn. Duon Juglandaceae	Perennial tree /38866	Bark, fruits and leaves	Tooth infection and toothache, tongue cleaning, mouth ulcers, dry cough, hypertension, joint pains, hair fall, weak milk production in cows, chilblain, insect repellent.	Bark of the root is used as an antiseptic tooth brush locally called "Dandasa". It is used to clean the teeth and hence to protect them from infection and ache. The bark is also chewed to clean the tongue, heal the mouth ulcers and by ladies to decorate their lips. Ripe fruit kernels are eaten to cure dry cough and hypertension. Oil obtained by grinding of fruit kernels is considered a best home remedy for joint pains and hair falls by its external massages. The oil cakes are fed to cows to enhance milk production. Dried leaves along with the dried seeds of <i>Datura stramonium</i> are vigorously boiled in water to prepare hot water extract which is used to wash the feet during severe cold in winter to cure Chilblain. Fresh green leaves are used as insect repellent.

<i>Lagenaria siceraria</i> (Molina) Standl. Kashir Aull (Cucurbitaceae)	Annual herb /38908	Fruits	Cough, cold, fever, chest pain, stomach ulcers, stomach heat up, kidney stones, urine problems and yoke gall.	Fresh fruits after peeling off the rind and removing seeds are cut into thin slices. Slices are sun dried and preserved in the form of garlands at home for winter season. In winter, decoction made from them is used in the treatment of cough, cold, fever, chest pain, stomach ulcers, stomach heatup, to dissolve kidney stones and promote urine flow. Dried fruit is burnt to get ash which is mixed with mustard oil to make paste. The paste is slightly warmed and the applied on the neck of bulls to cure yoke gall.
<i>Linum usitatissimum</i> Linn. Alish (Linaceae)	Annual herb /38907	Seeds	Boils, rheumatism and less milk production in cows.	Chewed seeds are applied in the form of poultice for the relief of painful and pus filled boils. Seed oil is considered best home remedy against rheumatic pains. Oil cakes are fed to cows in a mixture of paddy chaff and water to enhance milk production.
<i>Malus domestica</i> Borkh. Maharaji Treil (Rosaceae)	Perennial tree /38873	Fruits	Dyspepsia, diabetes, jaundice, urinary problems, loss of appetite, phlegm, thirst, body fats, cough and other chest ailments.	Fruits are harvested and stored at some warm place for 15-20 days so as to ripe completely. Ripe fruits are eaten to cure dyspepsia, diabetes, jaundice, urinary problems, loss of appetite and to remove phlegm from the chest, quench the thirst and dissolve the body fats. Fruit is cut into small circular slices which are sun dried and preserved in the form of garlands at home for winter. These are eaten and considered to be good for the treatment of cough and other chest ailments.
<i>Marrubium vulgare</i> Linn. Troper (Lamiaceae)	Perennial herb /38889	Whole plant	Arthritic pains, swelling of eyelids, abdominal pain, dysentery, chilblain and muscular pains.	Fresh leaves are soaked in hot water for two minutes and then removed and crushed into poultice. Poultice is spread on a cloth, wrapped in it, and then tied on arthritic joints to alleviate pain. The same poultice is applied on eyelids to cure their swellings. Plant is crushed and paste is made from it by mixing with cow butter. The resultant paste is given orally to children against abdominal pain and to cattle against dysentery. Hot water extract is prepared by boiling the dried herb thoroughly in salt water. Extract is then used to wash feet and legs to cure chilblains and muscular pains respectively.
<i>Morus nigra</i> Linn. Tul kull (Moraceae)	Perennial tree /38832	Fruits and leaves.	Stomach problems, constipation, boils, burns and wounds.	Ripe fruits are fondly eaten to cure stomach problems and constipation. Chewed fresh leaves are applied on boils as poultice to help in their ripening, bursting and evacuating the pus. Poultice is also applied on burns and wounds to stimulate healing.
<i>Nelumbo nucifera</i> Gaertn. Nadroo (Nelumbonaceae)	Perennial herb /38858	Rhizome and seeds.	Stomach problems, dysentery, constipation, vomiting, urinary problems and semen deficiency.	Roasted rhizome is taken in case of stomach problems and dysentery. Fresh rhizome is either eaten raw or sliced, and cooked as vegetable against constipation. Fresh seeds are given in case of vomiting, urinary problems and semen deficiency.
<i>Nymphaea maxicana</i> Zucc. Bumiposh/Gul-e-nelofar (Nymphaeaceae)	Perennial herb /38859	Rhizome, stolons and flowers	Hair fall, boils, diabetes, rheumatism, fever, heart palpitation, urinary problems and liver disorders.	Rhizome powder is mixed with oil to make paste which is applied on hair to check hair fall. Paste is also applied on painful and pus filled boils of head for their treatment. Stolons are collected, dried, cooked and taken against diabetes and rheumatism. Dried stolons after boiling in salt water are tied over painful boils for 3-4 days for their complete removal. Flower decoction is given against fever, heart palpitation, urinary problems and liver disorders.
<i>Oryza sativa</i> Linn. Daani Poaceae	Annual herb /38914	Fruits (grains)	Post delivery problems in cows, mumps, constipation and an antiseptic.	Rice infusion is used for bathing new born baby to give protection against infectious diseases. Grains are fed to cows after delivery to facilitate the detachment and expulsion of placenta. Rice flour is made into semi liquid paste in water. It is applied externally on jaws below the level of ears to cure mumps in children. Same paste after adding with more water is given to sheep against constipation. Foam formed due to boiling of rice is collected by ladies and applied as antiseptic on freshly pin holed ear.

## CONCLUSION

Keeping in view the high cost and side effects of allopathic medicine, the use of medicinal plants against different ailments plays a significant role in meeting the primary health care needs of the rural communities of Bandipora district. This district is fairly rich not only in medicinal plant species but has also deeply rooted traditional knowledge of these medicinal plants among the people. An immensely valuable database could be the outcome of this knowledge which in turn could provide a baseline information for the commercial exploitation of bioresources. Besides, the information could prove a fruitful source for pharmacologists, phytochemists, botanists and to those interested in the development of alternative therapies. Utilization of indigenous drug resources will increase the local industry on one hand and minimize the expenditure incurred on the purchase of foreign drugs on the other. In view of the present study of medicinal plants, research and conservation efforts should be focused on these resources of the area so that in future the coming generation

could benefit from these precious plants that are a real gift to mankind. Besides, an understanding of the market potential of medicinal plants could provide rural farmers with the incentive for the cultivation of high demand species.

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