This paper presents the results of a study on ethno medicinal plants used by local traditional healers of selected remote villages, namely Ranipur, Aaramganj & Vishramganj of Panna District of Madhya Pradesh. The methods followed were based on questionnaire for documentation of indigenous knowledge. Regular interviews were conducted in local communities, to investigate local people and knowledgeable persons, who are the main user of medicinal plants. This investigation revealed that, the traditional healers used 43 plant species belonging to 35 genera of 22 families were recorded during field trips from selected villages. Among all the plant species, tree vegetation found to be most dominant followed by shrubs, herbs and climbers. In this study most dominant family was Fabaceae and leaves were the most frequently used plant part for treatment of ailment and diseases. The check list and ethno medicinal inventory was developed.

**Keyword:** Biodiversity, Ethnomedicinal plants, Panna district, Traditional healers.

1. **Introduction**

Panna district is the important stick of Bundelkhand of Madhya Pradesh (MP). The area which has rich cover of the forest and important river tributaries suffering from drought causes reduction in the floral wealth of the region. Panna is located in the north eastern part of MP. It forms the Northern district of Sagar commissioner’s division. Panna district lies between 23° 45' and 25° 10' North latitudes and 79° 45' and 80° 40' East longitudes. The shape of the district is roughly triangular, tapering to the North but the nearest portion falling at the latitude of Panna town. The district is bounded by Banda district of Uttar Pradesh in the North, Satna in the East, Jabalpur in the South, and Damoh and Chhatarpur districts in the West. It has an area of 7,135 km². The whole district lies on the Vindhyachal plateau with an average height of 350 meters. Among the prominent features are the Kymore range and the Panna range which traverse across the southern part and the north-eastern part, respectively. On the other hand, biodiversity is a part of our daily lives and livelihood. Every country has the responsibility to conserve, restore and sustainably use the biological diversity within its jurisdiction. The importance of biodiversity can be understood, it is not easy to define the value of biodiversity, and very often difficult to estimate it. In India, many rural communities particularly the tribal’s obtain considerable part of their daily food from the wild plants. Some examples are: *Ceropegia bulbosa* in Central India and Western Ghats; *Codonopsis ovata* in Himalayan region; *Ardisia sp.* and *Meliosma pinnata* in the North-
East; *Eremurus himalaicus*, *Origanum vulgare* and *Urtica hyperborea* in Lahaul-Spiti and Ladakh; *Allium carolinianum* and *Cicer microphyllum* in Kashmir and *Sesuvium portulacastrum* in Coastal areas.

The practice of using herbal treatment for diseases dates back to the very earliest of known human history. Due to contrast intimacy with vegetation cover, primitive communities have gained profound knowledge about the utilities of medicinal plants. They have full confidence in them and their time tested medicines [4]. Out of the total 4, 22,000 flowering plants reported from the world [5] more than 50,000 are used for medicinal purposes [6].

In India, almost 95% of the prescriptions are plant-based in the traditional systems. Medicinal plants which play vital roles in human health care are pharmaceutically important, and form an important sector of industry having a potential trade value of over Rs. 3,500 crores. Due to growing recognition of natural products, non-toxicity and easy availability, its demand is increasing and thereby, its cultivation has also been increased [7]. People living in tribal localities and in villages are using indigenous plants as medicines from long ago because this knowledge reaches to them through generation to generation, and is based on experience [8]. Also the tribes and villages are far away from cities and mostly there are no health facilities. Inhabitants are dominantly poor or middle class and the prices of synthetic drugs are rising day by day and they cannot withstand the sharply rising prices of synthetic drugs, so as a consequence, non-availability of expensive synthetic drugs [9].

Keeping in view the importance of flora of Panna district, the study confined to collect the indigenous knowledge of local people about the medicinal uses of native plants. As the people of the selected areas have empirical observation of the nature and by communicating the other people of their culture; they get indigenous knowledge of local plants. So in this way the ethno-medicinal knowledge of plants is linked to the local culture and history. As inhabitants of the area are mainly using traditional means to cure diseases and this asset of indigenous knowledge is transferring from generation to generation only through verbal means of communication [10]. So this research was an effort to document and to preserve this folk asset.

The main aims of present research work were: to explore the ethno-medicinal knowledge of local people of selected remote villages of Panna district; to enlist the indigenous medicinal plants used by local people for common day ailments; to create awareness among the local community about the protection of native medicinal flora; and to collect native medicinal plants of the area for proper identification and future references.

2. Material and methods

Present study was confined to the identification of ethno medicinal plants used by traditional healers of selected remote villages of Panna district. The study was conducted during February, 2012 to January, 2013 in three remote villages i.e. Ranipura, Vishramganj and Aaramganj of the area.

Frequent field trips were arranged in order to collect information about the folk/culinary knowledge of medicinal plants used by the local people to cure them from various diseases. In total of three remote villages i.e. Ranipura, Vishramganj and Aaramganj of the area were extensively surveyed for research work. During field trips, the questionnaire (Medicinal Plants Datasheet) was used to interview the local inhabitants, older people including men and women both, who were familiar with traditional uses of indigenous plants. In total of 50 informants including 37 men and 13 women were interviewed during survey. Interviews were conducted with local peoples in different villages individually. Repeated queries were made to get the data confirmed.

Frequent field trips of the area were arranged to collect the live specimens. Throughout the field trips, a general collection of plants were made. The fully dried specimens were mounted on herbarium sheets. Plants were identified with the
help of available literature [11, 12, 13, 14] and comparing with the already identified plant specimens of the herbarium at Department of Botany, Dr. H.S. Gour University, Sagar (M.P.). After correct identification, the plants were deposited in herbarium at Department of Botany, Dr. H.S. Gour University, Sagar for future references. Ethno-medicinal inventory was developed consisting of botanical name followed by their local name, family, part used and ethno-medicinal uses.

3. Results & Discussion

The ethno medicinal data on 43 plant species belonging to 35 genera of 22 families, during summer, rainy and winter season were collected. Information regarding their botanical name, local name, family, part used and their ethno medicinal uses are listed in Table 1.

Table 1: Ethnomedicinal plant used by traditional healers from three remote villages of Panna district of Madhya Pradesh.

<table>
<thead>
<tr>
<th>S No</th>
<th>Family</th>
<th>Botanical name</th>
<th>Local name</th>
<th>Habit</th>
<th>Parts used</th>
<th>Ethno-medicinal uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Monocots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Liliaceae</td>
<td>Aloe barbadensis Mill.</td>
<td>Ghee kunvar</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Boils, piles and fever</td>
</tr>
<tr>
<td>2</td>
<td>Poaceae</td>
<td>Cymbopogon martinii (Jones) Schult</td>
<td>Palmarosa</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Fever and phlegmatic pains</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cynodon dactylon (L.) Pers</td>
<td>Dub ghas</td>
<td>Herb</td>
<td>Roots</td>
<td>Diuretic and laxative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dicots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Amaranthaceae</td>
<td>Achyranthes aspera (Mill.) Linn.</td>
<td>Addhajhara</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Diuretic, dropsy, piles, skin eruptions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amaranthus viridis L.</td>
<td>Chaulai</td>
<td>Herb</td>
<td>Leaves</td>
<td>Emollient, snake and scorpion bite</td>
</tr>
<tr>
<td>2</td>
<td>Areccaceae</td>
<td>Phoenix sylvestris (L.) Roxb.</td>
<td>Khajoor</td>
<td>Tree</td>
<td>Fruit, root</td>
<td>Toothache, tonic, cooling and laxative</td>
</tr>
<tr>
<td>3</td>
<td>Asclepiadaceae</td>
<td>Calotropis procera (Wild) R.Br.</td>
<td>Madar</td>
<td>Shrub</td>
<td>Whole plant</td>
<td>Malaria and cholera</td>
</tr>
<tr>
<td>4</td>
<td>Celastraceae</td>
<td>Elaeodendron glaucum Roxb.</td>
<td>Jamrasi</td>
<td>Tree</td>
<td>Root</td>
<td>Snake bite</td>
</tr>
<tr>
<td>5</td>
<td>Chenopodiaceae</td>
<td>Chenopodium album L.</td>
<td>Bathua</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Laxative and anthelmintic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spinacea oleracea L.</td>
<td>Palak</td>
<td>Herb</td>
<td>Leaves, stem</td>
<td>Anemia, bone's tonic and produce fresh blood</td>
</tr>
<tr>
<td>6</td>
<td>Combretaceae</td>
<td>Terminalia arjuna W. &amp; A. Prod.</td>
<td>Arjun</td>
<td>Tree</td>
<td>Leaves, bark</td>
<td>Cardiac tonic, earache.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminalia bellerica (Gaertn.) Roxb.</td>
<td>Bahera</td>
<td>Tree</td>
<td>Bark, fruits</td>
<td>Anaemia and leucodema curing cough, bronchitis, insomnia, dropsy, dyspepsia, flatulence, vomiting, skin diseases, leprosy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terminalia tomentosa W. &amp; A. Prod.</td>
<td>Saaj</td>
<td>Tree</td>
<td>Bark</td>
<td>Diarrhoea</td>
</tr>
<tr>
<td>7</td>
<td>Cucurbitaceae</td>
<td>Cucumis melo var agrestis Naudin</td>
<td>Kharbooja</td>
<td>Climber</td>
<td>Fruit</td>
<td>Digestive and stomach problems</td>
</tr>
<tr>
<td>8</td>
<td>Cyperaceae</td>
<td>Cyperus rotundus (L.)</td>
<td>Delia ghas</td>
<td>Herb</td>
<td>Tuber</td>
<td>Anthelmintic, stimulant, diuretic</td>
</tr>
<tr>
<td>9</td>
<td>Euphorbiaceae</td>
<td>Ricinus communis Linn.</td>
<td>Arandi</td>
<td>Shrub</td>
<td>Seeds, leaves, bark</td>
<td>Boils, swelling, laxative and to start labour pain</td>
</tr>
<tr>
<td>10</td>
<td>Fabaceae</td>
<td>Acacia arabica (Lam.) Willd.</td>
<td>Babool</td>
<td>Tree</td>
<td>Leaves, fruits</td>
<td>Cough, dysentery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acacia catechu (L.) Willd. Oliv.</td>
<td>Khair</td>
<td>Tree</td>
<td>Wood</td>
<td>Diarrhoea, eruptions of the skin, leprosy, leucodema and wounds, anaemia, diabetes, inflammations and intermittent fever</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acacia leucophloea Willd.</td>
<td>Reonja</td>
<td>Tree</td>
<td>Barks, gum, leaves</td>
<td>An anthelmintic an antipyretic an antidote for snake bites, bronchitis, cough, vomiting, wounds, ulcers, diarrhea, dysentery, internal and</td>
</tr>
<tr>
<td>Family</td>
<td>Species</td>
<td>Common Name</td>
<td>Part Used</td>
<td>Problems / Uses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>-------------</td>
<td>-----------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Albizia procera</strong> Benth.</td>
<td>Safed siris</td>
<td>Tree</td>
<td>All parts of the plant</td>
<td>Problems of pregnancy, stomach-ache, ulcers</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Butea monosperma</strong> Lamk.</td>
<td>Palas</td>
<td>Tree</td>
<td>Seeds, gum</td>
<td>Worm infestation and in the treatment of ringworm, boils and pimples</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cassia aungustifolia</strong> L.</td>
<td>Sena</td>
<td>Shrub</td>
<td>Leaves, branches, fruit</td>
<td>Headache, brain tonic and intestinal diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dalbergia latifolia</strong> Roxb.</td>
<td>Dhoabin</td>
<td>Tree</td>
<td>Leaves, roots, wood</td>
<td>Dyspepsia, diarrhoea, leprosy, obesity and worms</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dalbergia sissoo</strong> Roxb.</td>
<td>Shisam</td>
<td>Tree</td>
<td>Leaves, Roots, wood</td>
<td>Leprosy, boils, eruptions and stop vomiting</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tephrosia purpurea</strong> L.</td>
<td>-</td>
<td>Herb</td>
<td>Whole plant</td>
<td>Skin treatment, anthelmintic, anti-pyretic</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flacourtiaceae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacouritia indica (Burm. f.) Merr.</td>
<td>Katai</td>
<td>Shrub</td>
<td>Fruits, barks, roots, gum</td>
<td>Appetizing and digestive, diuretic, in jaundice intermittent fever cholera, nephritic colic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flacouritia ramontchii L’Herit.</td>
<td>Kaker</td>
<td>Shrub</td>
<td>Whole plant</td>
<td>Appetizing, diuretic, digestive, in jaundice, intermittent fever nephritic colic cholera</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lamiaceae</strong></td>
<td>Ocimum sanctum L.</td>
<td>Tulsi</td>
<td>Shrub</td>
<td>Seeds</td>
<td>Stomach and vomiting</td>
<td></td>
</tr>
<tr>
<td><strong>Malvaceae</strong></td>
<td>Abutilon indicum (Linn.) Sweet</td>
<td>Kanghee</td>
<td>Herb</td>
<td>Leaves, stem</td>
<td>To treat boils</td>
<td></td>
</tr>
<tr>
<td><strong>Meliaceae</strong></td>
<td>Azadirachta indica A. Juss.</td>
<td>Neem</td>
<td>Tree</td>
<td>Leaves</td>
<td>Skin diseases and blood purification</td>
<td></td>
</tr>
<tr>
<td>Melia azadarachta L.</td>
<td>Bakain</td>
<td>Tree</td>
<td>Seed, leaves</td>
<td>Diabetes, blood purification and skin tonic</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moraceae</strong></td>
<td>Ficus racemosa L.</td>
<td>Umar</td>
<td>Tree</td>
<td>Root, bark, fruits</td>
<td>Leucorrhoea, blood disorders, burning sensation, fatigue, urinary discharges, leprosy, menorrhagia, epistaxis, intestinal worms, asthma and piles</td>
<td></td>
</tr>
<tr>
<td>Ficus religiosa L.</td>
<td>Pipal</td>
<td>Tree</td>
<td>Seeds, fruits</td>
<td>Laxative, cooling and alterative</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Myrtaceae</strong></td>
<td>Eucalyptus globulus Sm.</td>
<td>Safeda</td>
<td>Tree</td>
<td>Seeds, leaves</td>
<td>Malaria, antibacterial and antiseptic</td>
<td></td>
</tr>
<tr>
<td><strong>Rhamnaceae</strong></td>
<td>Zizyphus jujuba Lamk.</td>
<td>Ber</td>
<td>Shrub</td>
<td>Leaves, dried fruits</td>
<td>Blood sugar, diarrhoea</td>
<td></td>
</tr>
<tr>
<td>Zizyphus nummularia (Burm.f.) Wight</td>
<td>Jangli beri</td>
<td>Shrub</td>
<td>Fruit, leaves, roots</td>
<td>Jaundice</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rubiaceae</strong></td>
<td>Anthocepalus cadamba (Roxb.) Miq.</td>
<td>Kadamba</td>
<td>Tree</td>
<td>Bark, leaves</td>
<td>Inflammation, urinary retention, fever, cough, diarrhoea, menorrhagia, burning sensation, wounds, ulcer and general debility</td>
<td></td>
</tr>
<tr>
<td>Gardenia latifolia Ait. Hort. Kew.</td>
<td>Papara</td>
<td>Tree</td>
<td>Leaves, Roots, gum</td>
<td>Antispasmodic, anthelmintic splenomegaly, foul ulcers, wounds and obesity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitragyna parvifolia Korth.</td>
<td>Kaim</td>
<td>Tree</td>
<td>Root, bark, leaves</td>
<td>Internal or external hemorrhages, muscle pain, skin diseases, fever, inflammations, infections</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solanaceae</strong></td>
<td>Datura innoxia (Linn.) Miller</td>
<td>Datura</td>
<td>Shrub</td>
<td>Leaves, seeds</td>
<td>Hydrophobia and earache</td>
<td></td>
</tr>
<tr>
<td>Solanum nigrum Miller.</td>
<td>Makoy</td>
<td>Shrub</td>
<td>Whole plant</td>
<td>Phthisis, dropsy, for enlargement of spleen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The traditional healers were using these plants to treat the various ailments and diseases like boils, pain, coolness, cough & cold, diarrhoea, dysentery, earache, fever, malaria, headache, piles, phlegmatic pain, diuretic, laxative, dropsy, skin diseases, emollient, snake and scorpion bite, toothache, tonic, cholera, anthelmintic, anemia, leucoderma, bronchitis, insomnia, dyspepsia, vomiting, leprosy, digestive and stomach problems, wounds, diabetes, inflammations, antipyretic, ulcers, hemorrhages, problems of pregnancy, ringworm, obesity, worms, jaundice, asthma, blood sugar, hydrophobia etc.

Tree (21 species) was found to be the most used plants followed by shrub (11 species), herb (10 species) and climber (01 species) in descending order. The highest numbers of ethno medicinal plants were recorded in family Fabaceae (9 species). Three families namely Combretaceae, Rubiaceae and Solanaceae were contributing three species, seven families namely Amaranthaceae, Chenopodiaceae, Flacourtiaceae, Meliaceae, Moraceae, Poaceae and Rhamnaceae each have two species. However, rest of the reported families contributes only one species each (Figure 3).

![Fig 1: Number of plant species belonging to different habits.](image-url)
Fig 2: Ethnomedicinal plant based on number of species as plant part used.
Nearly seventy per cent of the population of urban and rural areas benefit from the Unani system of medicine in spite of very sophisticated hospitals and allopathic practitioners which work under the Government of India. In the rural areas, household remedies are being used for generations. Medicinal plants used by the practitioners of this system are easily available in the forest, mountains, valleys, gardens and agricultural fields. This system is relatively cheap and quite near to nature. In Indian subcontinent, these traditional systems are called as “Unani” or “Ayurvedic” system.

The present study provides information about some therapeutic uses of 43 plant species belonging 35 genera of 22 families. The plants are either used singly or in combinations with some other plants or plant parts. Some plant species are claimed to be quite effective remedies for snakebite, diarrhea, malaria, cough and cold, and stomach troubles etc. Since the uses are based on empirical knowledge, the scientific study of all these herbal drugs is highly desirable.
to establish their efficacy for safe use. Various areas of Panna region are enriched with useful medicinal plants. However, resource based areas are facing severe biotic interference and require be protecting and conserving by community participation. Community participation can be initiated by giving incentives to local people and creating awareness about the useful properties of medicinal plants and their commercial values.

All members of community in the area use ethno medicinal plants. Various parts of the plant are used in curing different ailments. During the study period, it was noted that the ethno medicinal plant wealth of Panna district are not fully exploited. Some ethno medicinally important plant species are fast dwindling, mainly due to human interference. So, the area needs proper protection for the conservation and survival bio-resources. The medicinal plants can be protected by the conservation program by help of local people. Regularly chemical screening of medicinal plant and their useful parts collected from the fields in different seasons should be done. The oil bearing medicinal plants should be fenced for chemical and biological investigation, as well as for preventing overgrazing, cutting and use as a fuel wood. Moreover, to prevent the extinction of medicinal species, efforts may be made to grow the sensitive species by acclimatizing them and if required them in situ as many species can be considered as an asset for human beings.[15]

Further research works should be formulized on base line of indigenous studies because there are still some diseases like “Cancer” and “AIDS”, for which there are no identified cures. So, ethno-directed studies can help in these research works.

It was concluded from this study that a nationwide survey of medicinal flora should be conducted to investigate and update the inventory of existing natural plant’s resources of the area specially and generally throughout the India. In view of plentiful occurrence of number of plant species in Panna and its surroundings, it is suggested that National Medicinal Plant Board of India may be persuaded to prepare a comprehensive report for the establishment of small scale processing units for the valued drugs.

4. Acknowledgements

The authors are thankful to the Head, Department of Botany, Dr. H.S. Gour University, Sagar (MP), India for providing facilities and encouragement during the course of the investigation and to Water Resource Department, Madhya Pradesh for financial support through project.

5. References

1. Richhariya P. Ecological studies on arbuscular mycorrhizal fungi with special reference to their association with some medicinal herb of Panna national park and Dhubela forest. Ph. D. Thesis, Dr. H.S. Gour University, Sagar, India, 2010.
10. Sharma NK. Ethnomedicine of Mukundaras (SE Rajasthan) plants remedies used in Guinea worm


