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RESEARCH ARTICLE

PRELIMINARY INVESTIGATION AND RECTIFIED CHECKLIST OF MEDICINAL PLANT OF NARMADA RIVER, JABALPUR REGION

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ABSTRACT

India is regarded as the world's botanical garden and a repository for biodiversity. The major objective of this paper is to categorize the medicinal plants that grow around the Narmada River in the Jabalpur region of Madhya Pradesh and to describe how these plants are used to treat human illnesses. From September 2022 to February 2023, exploratory field excursions were performed to the village to examine the therapeutic plants and gather information from the residents. From this investigation, 107 species of useful medicinal plants from 49 families were identified, and the villagers provided information on their ethno-medical uses. The focus of this study is on the value, application, and preservation of medicinal plants among humans.

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INTRODUCTION

The Indian system of medicine has identified 1500 medicinal plants, 500 of which are primarily used in drug preparation and healthcare. Plants have enormous potential to become renewable sources of high-quality raw materials for industry, as well as a source of genetic diversity that can lead to the discovery of new things (Bartle, 1997). For health care, a large proportion of the world's population relies primarily on plants and plant extracts. Madhya Pradesh has a wide range of edaphic and climatic conditions that encourage the growth of a variety of medicinal plants. Folks use over 1100 medicinal plants as traditional medicines, which are found in the forest of the Satpura Vindhyan range of the state. Millions of people have used medicinal plants to promote and protect their health, relieve pain and discomfort, and cure diseases. According to their utility in curing various problems, these are used in various ways, such as bark, leaves, roots, stems, seeds, flowers, and fruits. Ayurveda treats patients holistically in relation to the environment. The medicinal herbs are among the chief sources it employs for maintaining or restoration of health. The curative properties of medicinal plants are growing in popularity because they are natural, non-narcotic, inexpensive even in impoverished areas, and have no side effects. Forest flora includes a variety of plants with medicinal properties that are used as food, timber, and fuel wood. According to Oomachan and Srivastava (1996), Madhya Pradesh is a unique state with a high concentration of tribal people in various pockets of forest ecosystem. He went on to say that these tribes' lives were intertwined with several herbal plants/products growing in the forests, which they used in folk medicine. The medicinal plants were gradually uprooted from the forest in wild forms, and due to heavy exploitation, many of the species are on the verge of extinction due to commercial utilisation. The export of such plants has reached 60 billion US dollars and is growing at a rate of 7% per year. WHO, 2001 Report, India exports 80,000 tonnes of medicinal plants in their natural state to the United States, the United Kingdom, and other countries.

METHODOLOGY

STUDY SITE: From September 2022 to February 2023, plant exploration work was carried out in the Jabalpur region to document the floral diversity of medicinally valuable plants. River Narmada is India's fifth largest river, flowing westward from the Mekhala range at an elevation of 1051 meters above sea level. Jabalpur is a major tourist destination in the country. Jabalpur is located between the latitudes of 23°10'N and 79°56'E. An intensive and extensive plant survey was conducted, covering almost all habitats and seasons.

COLLECTION AND IDENTIFICATION OF PLANT: Study was done on the vegetation and plant dispersion patterns. For the preparation of the herbarium and plant collection, standard procedures had been used (Jain and Rao 1977). Flora and Keys, as well as other literature that was available, were used to identify different plant species (Hooker 1892-1897; Ray 1984; Mudgal et al., 1977; Hains 1921-1924 and Saket & Saini, 2016).

Table 1. A Checklist of traditionally important medicinal plants in Jabalpur region with their Local/Botanical/Family names, morphology and their medicinal uses

S.N.	Plant Name		Family	Morphological Part Use	Medicinal Uses
	Local Name	Botanical Name			
1.	Aam	*Mangifera indica*	Anacardiaceae	Bark	Body pain
2.	Amarbel	*Cuscuta reflexa*	Convolvulaceae	Root	Piles
3.	Anthi	*Helicteres isora*	Sterculiaceae	Root	Colic pain
4.	Aonla	*Emblica officinalis*	Euphorbiaceae	Fruit	Diabetes
5.	Apamara	*Achyranthes aspera*	Amaranthaceae	Whole plant	Tuberculosis
6.	Arandi	*Ricinus communis*	Euphorbiaceae	Root	Weakness & body pain (after pregnancy)
7.	Ashwagandha	*Withania somnifera*	Solanaceae	Leaf	Fatness
8.	Baadisand	*Coccinia grandis*	Cucurbitaceae	Bulb	Rheumatism
9.	Babul	*Acacia nilotica*	Mimosaceae	Bark	Dysentery
10.	Bada chakonda	*Cassia occidentalis*	Caesalpiniaceae	Seed	Piles
11.	Badi dudhi	*Euphorbia hirta*	Euphorbiaceae	Whole plant	Paralysis
12.	Baheda	*Terminalia bellirica*	Combretaceae	Fruit	Asthma
13.	Balraj	*Peucedanum grande*	Apiaceae	Whole plant	Weakness
14.	Ban tulsi	*Ocimum basilicum*	Lamiaceae	Leaf	Cancer
15.	Ban tumbi	*Trichosanthes dioica*	Cucurbitaceae	Root	Skin disease
16.	Banado	*Zingiber purpureum*	Zingiberaceae	Rhizome	Rheumatism
17.	Bans, banslochan	*Dendrocalamus strictus*	Poaceae	Resin	Earache
18.	Bantubi	*Trichosanthes cucumerina*	Cucurbitaceae	Root	Swelling
19.	Baramasi	*Tridax procumbens*	Asteraceae	Leaf	Toothache
20.	Bel	*Aegle marmelos*	Rutaceae	Leaf	Cuts
21.	Ber	*Zizyphus mauritiana*	Rhamnaceae	Leaf	Urinary disease
22.	Bhatkataiya	*Solanum anguivi*	Solanaceae	Fruit	Skin disease
23.	Bhilwa	*Semecarpus anacardium*	Anacardiaceae	Fruit	Pneumonia
24.	Bhindi	*Abelmoschus esculentus*	Malvaceae	Root	Leucorrhea
25.	Bhojraj	*Peucedanum dhana*	Apiaceae	Whole plant	Weakness
26.	Bhui-avala	*Phyllanthus niruri*	Euphorbiaceae	Whole plant	Jaundice
27.	Bihi	*Psidium guajava*	Myrtaceae	Leaf	Gastric trouble
28.	Bija	*Pterocarpus marsupium*	Fabaceae	Bark	Diarrhoea
29.	Bijnory	*Crotalaria bialata*	Fabaceae	Root	Weakness
30.	Bilaikand	*Ipomoea cairica*	Convolvulaceae	Tuber	Rheumatism
31.	Brahmi(Jalnim)	*Bacopa monnieri*	Scrophulariaceae	Whole plant	Fit
32.	Buch	*Acorus calamus*	Araceae	Root	Fit
33.	Chakonda	*Cassia tora*	Caesalpiniaceae	Root	Scorpion sting
34.	Chirhul	*Holoptelea integrifolia*	Ulmaceae	Leaf	Skin disease
35.	Chittawar	*Plumbago zeylanica*	Plumbaginaceae	Leaf	Skin disease
36.	Dub	*Cynodon dactylon*	Poaceae	Root	Urinary trouble
37.	Dudhi	*Euphorbia prostrata*	Euphorbiaceae	Root	Milk secretion
38.	Dudhiya kand	*Hemidesmus indicus*	Asclepiadaceae	Root	Diabetes
39.	Gandhila bamura	*Acacia farnesiana*	Mimosaceae	Root	Rickets
40.	Gataran	*Caesalpinia crista*	Caesalpiniaceae	Leaf	Malaria fever
41.	Gathuashankh	*Leonotis nepetaefolia*	Lamiaceae	Root	Piles
42.	Gawarpatha	*Aloe barbadensis*	Liliaceae	Leaf pulp	Urinary disease
43.	Genda	*Tagetes erecta*	Asteraceae	Leaf	Piles
44.	Gudsakru	*Sida alba*	Malvaceae	Root	Leucorrhea
45.	Gundla	*Cyprus rotundus*	Cyperaceae	Root	Fever
46.	Gunja	*Lannea coromandelica*	Anacardiaceae	Bark	Cut
47.	Gurbel	*Tinospora cordifolia*	Menispermaceae	Stem	Malaria fever
48.	Haadjudi	*Cissus quadrangularis*	Vitaceae	Stem	Bone Fracture
49.	Harra	*Terminalia chebula*	Combretaceae	Fruit	Asthma
50.	Hasiadapar	*Leea macrophylla*	Vitaceae	Root	Rheumatism
51.	Hurhur	*Cleome gynandra*	Capparidaceae	Leaf	Headache
52.	Indrayan	*Citrullus colocynthis*	Cucurbitaceae	Seed	Jaundice
53.	Jamun	*Syzygium cumini*	Myrtaceae	Bark	Body pain
54.	Jangli haldi	*Curcuma aromatica*	Zingiberaceae	Rhizome	Flatulence
55.	Jangli piyaz	*Drimia indica*	Liliaceae	Bulb	Scorpion sting
56.	Jhagadua, Amaltas	*Cassia fistula*	Caesalpiniaceae	Flower	Rheumatism
57.	Juditaap	*Andrographis paniculata*	Acanthaceae	Leaf	Fever
58.	Kadu kanda	*Dioscorea hispida*	Dioscoreaceae	Tuber	Weakness & body pain(after pregnancy)
59.	Kakora	*Momordica dioica*	Cucurbitaceae	Root	Snake bite
60.	Kali haldi	*Curcuma caesia*	Zingiberaceae	Rhizome	Asthma
61.	Kali mirch	*Piper nigrum*	Piperaceae	Fruit	Sciatica
62.	Kalihari,	*Gloriosa superba*	Liliaceae	Tuber part	Fever
63.	Kamraj	*Sida acuta*	Malvaceae	Whole plant	Weakness
64.	Kanji	*Pongamia pinnata*	Fabaceae	Fruit	Skin disease
65.	Kantili	*Solanum surattense*	Solanaceae	Root	Dysentery
66.	Karonda	*Carissa spinarum*	Apocynaceae	Root	Pneumonia
67.	Kaya	*Strychnos potatorum*	Loganiaceae	Bark	Paralysis
68.	Keukand	*Costus speciosus*	Zingiberaceae	Rhizome	Rheumatism
69.	Khamer	*Gmelina arborea*	Verbenaceae	Bark	Cut
70.	Kharenti	*Sida cordifolia*	Malvaceae	Root	Weakness

Continue ….

71.	Koha	*Terminalia arjuna*	Combretaceae	Bark	Heart ailment
72.	Kukrondha	*Blumea balsamifera*	Asteraceae	Whole plant	Bronchitis
73.	Kullu	*Sterculia urens*	Sterculiaceae	Resin	Dysentery
74.	Lahsun	*Allium sativum*	Liliaceae	Bulb	Gastric problem
75.	Magarmast	*Hibiscus lobatus*	Malvaceae	Leaf	Urinary trouble
76.	Mahanim	*Melia azedarach*	Meliaceae	Bark	Fever
77.	Maharukh	*Ailanthus excelsa*	Simaroubaceae	Bark	Jaundice
78.	Munga	*Moringa oleifera*	Moringaceae	Leaf	Weakness(after pregnancy)
79.	Mura	*Raphanus sativus*	Brassicaceae	Leaf	Jaundice
80.	Nim	*Azadirachta indica*	Meliaceae	Leaf	Fever
81.	Nimbu	*Citrus medica*	Rutaceae	Leaf	Nasal disease
82.	Palas	*Butea monosperma*	Fabaceae	Bark	Asthma
83.	Panchpatri	*Ipomoea pestigridis*	Convolvulaceae	Root	Skin disease
84.	Papita	*Carica papaya*	Caricaceae	Root	Stone
85.	Paras pipal	*Ficus arnottiana*	Moraceae	Fruit	Skin disease
86.	Pasaran	*Paederia scandens*	Rubiaceae	Leaf	Rheumatism
87.	Podina	*Mentha arvensis*	Lamiaceae	Leaf	Dysentery
88.	Potar	*Smilax zeylanica*	Liliaceae	Root	Leucorrhoea
89.	Rahar	*Cajanus cajan*	Fabaceae	Root	Cancer
90.	Ram datun	*Smilax perfoliata*	Liliaceae	Root	Leucorrhea
91.	Safed musli	*Chlorophytum arundinaceum*	Liliaceae	Root	Weakness
92.	Safedak(Madar)Thua	*Calotropis procera*	Asclepiadaceae	Root	Snakebite
93.	Salay	*Boswellia serrata*	Burseraceae	Bark	Cuts
94.	Sanjivani	*Selaginella bryopteris*	Selaginellaceae	Whole plant	Spermatorrhoea
95.	Sareta	*Cocculus hirsutus*	Menispermaceae	Root	Snakebite
96.	Sarpagandha	*Rauvolfia serpentina*	Apocynaceae	Root	Fit
97.	Sarson	*Brassica campestris*	Brassicaceae	Seed	Headache
98.	Satawar	*Asparagus racemosus*	Liliaceae	Root	Weakness
99.	Sem	*Dolichos lablab*	Fabaceae	Root	Weakness & body pain(after pregnancy)
100.	Semur	*Bombax ceiba*	Bombacaceae	Root	Weakness
101.	Sisam	*Dalbergia sissoo*	Fabaceae	Leaf	Piles
102.	Suran kanda	*Amorphophallus paeoniifolius*	Araceae	Tuber part	Swelling
103.	Surtali	*Woodfordia fruticosa*	Lythraceae	Root	Dysentery
104.	Tejraj	*Peucedanum nagpurense*	Apiaceae	Whole plant	Weakness
105.	Tendu	*Diospyros melanoxylon*	Ebenaceae	Bark	Cuts
106.	Tilwan	*Mallotus philippensis*	Euphorbiaceae	Bark	Weakness
107.	Tulsi	*Ocimum sanctum*	Lamiaceae	Root	Diabetes

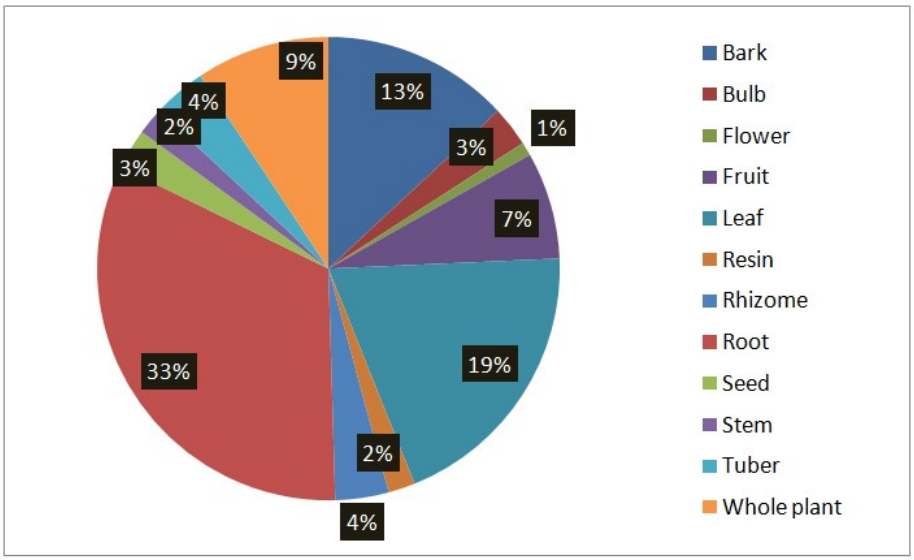

Figure 1. Percentage of Plant Part used as medicine

RESULTS AND DISCUSSION

MEDICINALLY IMPORTANT PLANTS: In the present study there are 107 medicinally important plant species belonging to 49 families were collected from the Jabalpur region at all season and their botanical name, family name, local name, morphology of the parts used and their medicinal properties were given in Table 1.

DISEASES CURED BY MEDICINAL PLANTS: The villagers used various medicinal plants to remediate variety of diseases and ailments like diarrhea, diabetes, asthma, fever, jaundice, rheumatism, wounds, cuts, stomach pain, cough, cold, poisonous bites, body heat, body pain, bowl complaint, bronchitis, dysentery, earache, weakness, eye troubles, hair growth, intestinal worms, jaundice, leprosy, menstrual trouble, piles, pimples, ulcer, tooth-ache, urinary troubles, vomit, etc., the villagers used these medicinal plants in the form of juice, paste, powder, extract, decoction, cooked or raw forms.

PARTS OF MEDICINAL PLANTS USED: The villagers used diverse parts of the medicinal plants based on their ability to cure disease such parts includes leaf, roots, bark, seed, fruit, flower, stem, tuber part, resin, rhizome, bulb or even whole plant. Roots are highly used by the village peoples, it accounts for 32% of all parts, next predominantly used parts are leaf contributes 19% followed by bark 13%, whole plant 9%, fruit which included ripe and unripe both contribute 7%, tuber 4%, seed, rhizome and bulb contribute 3% each, stem, and resin contribute 2% each while contribute only flowers 1% among all 107 plant species shown in Table 1 and Figure 1.

CONCLUSION

During the tenure of the current study, a total of 107 plant species were recorded around the Narmada River in the Jabalpur region (M.P.). According to the study site, it is one of the biodiversity rich regions for medicinal and economically important plants. There are numerous potential applications for this work, including use in the treatment of various diseases among rural people. Villagers have been using these plants to treat a variety of infectious and non-infectious diseases for thousands of years. Aside from that, another important application of this research is to raise awareness among rural people about traditional medicinal plants.

REFERENCES

Bartle L. Why do we need new crops as alternative sources for industrial and medicinal material? In : Domestication, Production and Utilization of new crops, edited by Smart J & Haq N (Colorilene Printers, Bangladesh). 1997.

Haines H.H. The Botany of Bihar and Orissa (BSI Publication, Calcutta, India). 1921-1924, 1-3.

Hooker J.D. Flora of British India (BSI Publication, Calcutta, India). 1892-1897, 1-7.

Jain S.K. and Rao R.R. A Handbook of Field and Herberium Method, Today and Tomorrows. (Oxford and IBH Publishing company, New Delhi). 1977.

Mudgal V., Khanna K.K. and Hajara P.K. Flora of Madhaya Pradesh (BSI Publication, Calcutta, India). 1977. 8. Singh NP, Khanna KK, Mudgal V, Dixit RD. Flora of Madhya Pradesh (BSI Publication, Calcutta, India). 2001.

Oomachan M. and Srivastava, J.L. Flora of Jabalpur. *Scientific Publisher*, Jodhpur. 1996, 1-354.

Ray G.P. Grasses of Madhaya Pradesh (BSI Publication, Allahabad, India). 1984.

Saket, Suresh Prasad, Saini and Vimal K. A comprehensive Floristic Study of Jabalpur District with Special Emphasis to Dominant Family, IJSR. 2016, 5(11): 90-91.

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