Plant Archives Vol. 25, No. 2, 2025 pp. 1595-1602 e-ISSN:2581-6063 (online), ISSN:0972-5210

Plant Archives

Journal homepage: http://www.plantarchives.org

DOI Url : https://doi.org/10.51470/PLANTARCHIVES.2025.v25.no.2.232

DOCUMENTING THE RICH MEDICINAL BIODIVERSITY OF MAHASAMUND DISTRICT OF CHHATTISGARH INDIA: A COMPREHENSIVE ETHNOBOTANICAL STUDY

Supriya Bhoi[1], Surendra Kumar Gautam[1]* and Devyani Sharma[2]

[1]Department of Life Science, Shri Rawatpura Sarkar University, Raipur, Chhattisgarh, India

[2]C.G. Climate Change Centre, Naya Raipur, Chhattisgarh, India

*Corresponding author E-mail: gautam1436@gmail.com

(Date of Receiving-17-07-2025; Date of Acceptance-30-09-2025)

ABSTRACT

Ethnobotany connects ancient custom and contemporary science by providing important information on medicinal plants. In the current research, the ethnomedicinal knowledge of tribal peoples in Mahasamund district, Chhattisgarh, India, emphasizing therapeutic application and conservation value is documented and analyzed. Field surveys were completed from July to September 2021 with a cross-sectional study design. Information was gathered using semi-structured interviews of traditional healers and tribal communities, augmented with field visits for plant specimen collection and taxonomic identification by using standard flora references and expert verification. 120 plant species representing 59 families were documented, used in the treatment of 72 human diseases. Tree, shrub, and herb were the most frequent life forms. The results demonstrate the diverse ethnomedicinal wealth of Mahasamund's tribal communities and their dependence on nature-based remedies. This highlights the need for comprehensive documentation, scientific proof, and conservation of traditional knowledge, providing avenues for new drug discovery and sustainable biodiversity management.

***Key words*:** Ethnobotany, Medicinal plants, Indigenous knowledge, Tribal communities, Mahasamund, Chhattisgarh, Biodiversity conservation, Traditional medicine.

Introduction

The oldest known repository of human knowledge about the therapeutic applications of plants in the Indian subcontinent dates from the Rig-Veda period, which lasted from 4500 BC to 1600 BC (Puspangadan, 1995). The term "ethnobotany," which combines the words "ethno" and "botany," was coined in the 1890s by John William Harshberger. It is a science that studies how humans and plants interact. Ethnobotanical research unfolds us total information regarding plants and herbal applications of medicinal plants (Rahul, 2013). India is one of the world's 12 megabiodiversity countries and is termed a nation that contains high levels of all forms of biodiversity like ecosystem, species, and genetic diversity principally because of its tropical region, varied physical features, and climatic types are found (Jain,1967). Over 53.8 million tribal people live in 5,000 forest-dominated tribal community villages on the Indian subcontinent, which makes up 15% of the country's total land area and is home to one of the greatest ethnobotanical wealth repositories in the world (Chowdhuri, 2000). India possesses one of the richest traditionally used medicines of the nation with a plethora of medicinally valuable herbs, shrubs and trees (Jain *et al*., 2018). Whether distributed to be in the vicinity of 25,000 effective plant-derived preparations are well known to Indian rural communities and employed as folk medicine (Shukla *et al*., 2010). Since the beginning of time, people have used medicinal plants.

Most of the drugs are plant-based, and some plants are also under investigation to determine their therapeutic efficacies (Balunas, 2005; Vickers *et al*., 2001). The World Health Organization estimates that up to 80% of people in developing nations still get their basic medical

care from local medicinal plants (WHO, 2002). Up to 90% of people in some African countries still only use plants as medicine (Hostettmann *et al.*, 2002). The majority of synthetic drugs are derived from precursor chemicals found in plants, and about 25% of prescribed medications and 11% of medications considered essential by the WHO are plant-derived (Rates, 2001). Forests make up 45% of the state of Chhattisgarh.

Various tribal societies such as gond, baiga, korku, etc. reside in these forests (Eldeen *et al.*, 2016). For food, shelter, lumber, and medicine, tribal societies mostly depend on forest resources (Mohan *et al.*, 2008). Ethnobotanical study is associated with the interaction of plants with people (Wanjohi *et al.*, 2020). It is founded on the tribal people's traditional knowledge of medicinal plants, which has been passed down through the generations (Ahirwar, 2017). An anthropological approach to botany is commonly referred to as ethnobotany. Ethnobotanical research involves a number of steps, including surveying, identifying and collecting plants, preparing herbariums, and more (Debbarma, 2017). Over the past few years, ethnobotanical research has gained a great deal of attention and importance. The states of Uttar Pradesh, Orissa, Andhra Pradesh, Maharashtra, Madhya Pradesh, and Jharkhand encircle Chhattisgarh, which is located between 17 and 46' North and 80-15' and 84-20' East. The majority of the state is covered in forests. Chhattisgarh's Mahasamund districts are located at latitudes 81°59'56" to 83°16'10" E and latitudes 20°49'30" to 21°33'07" N. The district is widely forest-covered and a large number of tribals reside in the region. In several districts of Chattisgarh, including Bastar (Nanda and Shaw, 2008); Korwa (Ekka, 2013); Surguja (Chatterjee, 2014); Dantewada (Sahu *et al.*, 2014); Jashpur (Painkara *et al.*, 2015); Raigarh (Singh and Bharti, 2015); Durg (Sharma *et al.*, 2016); Jashpur (Sharma, 2017); Amarkantak (Mishra *et al.*, 2017); Janjgir-Champa (Vinodia *et al.*, 2019); Korea (Kushwaha, 2020); Atal Nagar (Pandey, 2021). The knowledge they have acquired through generations of observations is transmitted orally regarding the ability of medicinal plants to treat various illnesses and conditions. There is growing recognition of the need to incorporate indigenous knowledge from the area in order to manage and conserve natural resources in a sustainable manner (Posey, 1992).

Furthermore, potential economic benefits-specifically, the medicinal value of tropical forest products- are valued more highly than the simple exploitation of timber (Pimbert and Pretty, 1995). Traditional knowledge of vegetation and the utilization of plants in India is vanishing in recent years since the new villagers move to the urban areas in search of better life and employment.

The ethnomedical plant observation and documentation in Mahasamund district, Chhattisgarh, as well as the exploration of the medicinal applications of these plants by tribal communities, are also covered in the current study. The study's main goal is to identify the types of medicinal plants that the Mahasamund tribal community uses and document the traditional medical knowledge surrounding their use.

Materials and Methods

Based on the Champion and Seth Forest type classification (1968), forests in Chhattisgarh fall under two categories of groups, that is, Mahasamund district is home to both tropical dry and tropical moist deciduous forests having wealth in forest diversity in the form of mixed deciduous forests.

The current study ethnomedicinal plant survey was done in Saraipali, Mahasamund, Basna, Bagbahra and Pithora blocks of Mahasamund district (Fig. 1) from 25 July 2021 to 26 September 2021 through the pre-designed semi-structured questionnaire (Cotton, 1996). The study-selected block is home to a number of tribal groups, including the Bhujia, Dhanwar, Binjhwar, Halba, Kanwar, Kharai, Kamar, Munda, Bahelia, Pardhi, Saur, Sahariya, Sonar, Sanwara, and Kharwar. Plants, shrubs, and trees of medicinal importance were sampled in this survey as well using the approach of analyzing information from multiple sources and sampling methods. Plant species identification was facilitated through available flora, local tribals, traditional practitioners, Vaidyas, field guides etc. The Chhattisgarh Medicinal Plant Board, Raipur CG, National Medicinal Plant Board, FRLHT, IUCN India Library, and Tropical Forest Research Institute were among the online resources used to name all of the specimen samples that were gathered (Bodding, 1925; Hembrom. 1994; Paul and Jain, 1998). The Chhattisgarh

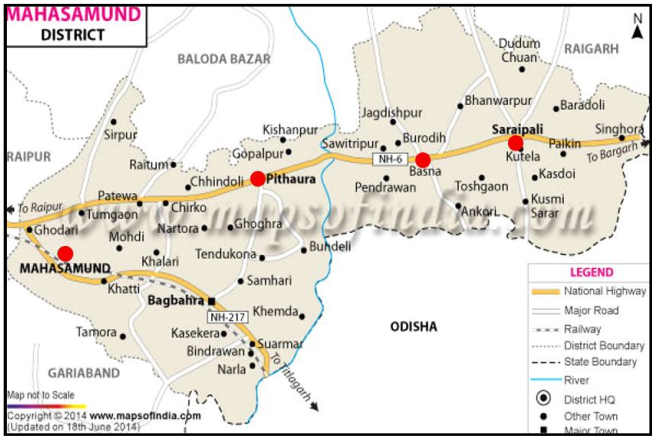

Fig. 1: Map of Mahasamund district with all five blocks.

Table 1: List of all collected medicinal plants from Mahasamund district during survey.

S.	Local Name	Botanical Name	Family	Plant Part used	Treatment for
1	Kachanar	*Bauhinia Purpurea*	*Fabaceae*	Buds	Piles
2	Giloy	*TinosporaCordifolia*	*Menispermaceae*	Stem	Rheumatoid arthritis
3	Ajwain	*Trachyspermumammi*	*Apiaceae*	Fruit	Postnatal conditions
4	Harra	*Terminalia Chebula*	*Combretaceae*	Seed coat	Digestion
5	Behra	*Terminalia bellerica*	*Combretaceae*	Fruit	Digestion
6	Amla	*Emblicaofficinalis*	*Phyllanthaceae*	Seed	Digestion
7	Pudina	*Menthaarevensis*	*Lamiacae*	Leaf	Acidity
8	Pippali	*Piper longum*	*Piperaceae*	Fruit	Postnatal conditions
9	Arak	*Calotropisprocera*	*Apocynaceae*	Flower	Dog bite
10	Dubilata	*Cynodondactylon*	*Poaceae*	Leaf	Scorpion bite
11	Neelgiri	*Eucalyptus sp*	*Myrtaceae*	Bark	Stomach ache
12	Ashwagandha	*Withaniasomnifera*	*Solanaceae*	Leaf	Hypertension
13	Ashok	*Saraca indica*	*Fabaceae*	Bark	Menstrual disorders
14	Bel	*Aegle marmeloscorrea*	*Rutaceae*	Bark	Mental disorders
15	Elaichi	*Elettaria cardamomum*	*Zingiberaceae*	Fruit	Chronic cough
16	Laung	*Syzgiumaromaticum*	*Myrtaceae*	Fruit	Cough
17	Bhringraj	*Ecliptaprostrata*	*Asteraceae*	Leaf	Hair problems
18	Neem	*Azadirachta indica*	*Meliaceae*	Leaf	Skin problems
19	Adrak	*Zingiber officinale*	*Zingiberaceae*	Stem	Cough
20	Kaju	*Anacardium accidentale*	*Anacardiaceae*	Fruit	Stomach ache
21	Char	*Buchananialanzan*	*Anacardiaceae*	Fruit	Fever
22	Shatavari	*Asparagus racemosus*	*Liliaceae*	Leaf	Infertility
23	Sarpagandha	*Rauvolfia serpentine*	*Apocynaceae*	Leaf	Hypertension
24	Bhuiamla	*Phyllanthus niruri*	*Phyllanthaceae*	Leaf	Jaundice
25	Chiraita	*Swertia chiraita*	*Gentianaceae*	Whole plant	Skin disease
26	Gudmar	*Gymnemasylvetsre*	*Asclepiadaceae*	Leaf	Diabetes
27	Ghritkumari	*Aloe barbadensis*	*Asphodelaceae*	Leaf	Acne
28	Methi	*Trigonella foenum*	*Fabaceae*	Seed	Diabetes
29	Peepal	*Ficusreligiosa*	*Moraceae*	Fruit	Neuralgia
30	Safed musli	*Asparagus adscendens*	*Asparagaceae*	Tuberous root	To enhance sex hormones
31	Imli	*Tamarindus indica*	*Leguminaceae*	Fruit	Diarrhoea
32	Sadabahar	*Catharanthus roseus*	*Apocynaceae*	Leaf	Bronchitis
33	Van Tulsi	*Ocimumgratissium*	*Lamiaceae*	Leaf	Cold, cough
34	Kali Musli	*Curculigoorchioides*	*Hypoxidaceae*	Tuberous root	Jaundice
35	Charota	*Cassia tora*	*Leguminoceae*	Leaf	Weight loss
36	Nimbulata	*Cymbopogon flexuosus*	*Poaceae*	Leaf	Digestion
37	Kaner	*Nerium indicum Mill.*	*Apocynaceae*	Leaf	Snake bite
38	Amaltas	*Cassia fistula*	*Caesalpiniaceae*	Bark	Snake bite
39	Arandi	*Ricinus communis Linn.*	*Euphorbiaceae*	Seed	Scorpion bite
40	Apamarg	*Achyramthes aspera*	*Amaranthaceae*	Root	Scorpion bite
41	Shankhpushpi	*Evolvulusalsinoides*	*Convolvulceae*	Whole plant	Scorpion bite
42	Guggul	*Commiphoramukul*	*Burseraceae*	Gum	Debility
43	Ber	*Ziziphus mauritiana*	*Rhamnaceae*	Bark of root	Debility
44	Baansa	*Adhatodazeylanica*	*Acanthaceae*	Leaf	Toothache
45	Brahmi	*Cetella asiatica*	*Apiaceae*	Leaf	Toothache
46	Bargad	*Ficus benghalensis*	*Moraceae*	Leaf	Abscess
47	Gurhal	*Hibiscus rosa-sinesis*	*Malvaceae*	Leaf	Boils
48	Bathua	*Chenopodium album*	*Chenopodiaceae*	Leaf	Burn
49	Kanta Chaulai	*Amaranthus spinosus*	*Amranthaceae*	Root	Eczema

Continue ...1

50	Haldi	*Curcuma longa*	*Zingiberaceae*	Rhizome	Skin problems
51	Amarbel	*Cusutareflexa*	*Cusculaceae*	Whole plant	Eczema
52	Kusum	*Schleicheraoleosa*	*Sapindaceae*	Stem	Itchinhg
53	Safed Kachnar	*Bauhinia acuminata*	*Caesalpiniaceae*	Bark	Leprosy
54	Aprajita	*Clitoriaternatea Linn.*	*Fabaceae*	Seed	Leprosy
55	Shisham	*Dalbergia sissoo*	*Fabaceae*	Bark	Seeds
56	Turai	*Luffa echinata*	*Cucurbitaceae*	Root	Leprosy
57	Aam	*Mangifera indica*	*Anacardiaceae*	Fruiit	Heat stroke
58	JungliBhata	*Solanum indicum*	*Solanaceae*	Leaf	Psoriasis
59	Sahdevi	*Vernoniacinerea*	*Asteraceae*	Seed	Ringworm
60	Makoi	*Solanum nigrum*	*Solanaceae*	Whole plant	Ringworm
61	Adusa	*Adhatodavasica*	*Acanthaceae*	Leaf	Scabies
62	Nimboo	*Citrus aurantifolia*	*Rutaceae*	Fruit	Wrinkles
63	Kathal	*Artocarpus heterophyllus*	*Moraceae*	Leaf	Diabetes
64	Gulmohar	*Delonixregia*	*Fabaceae*	Leaf	Diabetes
65	Kadam	*Mitragynaparvifolia*	*Rubiaceae*	Leaf	Mouth sores
66	Shahtoot	*Morus laevigata*	*Moraceae*	Fruit	Sore throat
67	Babool	*Acacia nilotica*	*Mimosaceae*	Flower	Skin colour
68	Karonda	*Carissa corandas*	*Apocynaceae*	Fruit	Constipation
69	Karela	*Momordica charantia*	*Cucurbitaceae*	Fruit	Diabetes
70	Jamun	*Syzygiumcuminii*	*Myrtaceae*	Seed	Diabetes
71	Patharchata	*Bryophyllumpinnatum*	*Rassulaceae*	Leaf	Kidney stone
72	Munga	*Moringa oleifera*	*Moringaceae*	Leaf	Anaemia
73	Pyaz	*Allium cepa*	*Liliaceae*	Bulb	Kidney stone
74	Lajjwanti	*Mimosa pudica Linn.*	*Mimosaceae*	Root	Diabetes
75	Dhatura	*Datura metel Linn.*	*Solanaceae*	Leaf	Hair lice
76	Palash	*Butea monosperma*	*Fabaceae*	Flowers	Leucorrhoea
77	Hadjod	*Cissus aurantifolia*	*Vitaceae*	Internode	Fracture healing
78	Tendu	*Diospyrus melanoxylon*	*Ebenaceae*	Fruit	Diarrhoea
79	Mehandi	*Lawsoniainermis*	*Lythraceae*	Leaves	White hair
80	Mahua	*Madhuca indica*	*Sapotaceae*	Flower	Diabetes
81	Harshinger	*Nyctanthusarbortristis*	*Oleaceae*	Seed	Dandruff
82	Khajur	*Phoenix sylvestris*	*Areaceae*	Fruit	Asthma
83	Paan	*Piper betle*	*Piperaceae*	Leaves	Mouth ulcer
84	Karanj	*Pongamia pinnata*	*Fabaceae*	Leaves	Gonorrhea
85	Anar	*Punica granatum*	*Punicaceae*	Bark	Expulsin of worms
86	Ganna	*Saccharum officinarum*	*Poaceae*	Stem	Jaundice
87	Reetha	*Sapindus laurifolia*	*Sapindaceae*	Fruit	Dandruff
88	Gokhru	*Tribulus terrestris*	*Zypophyllaceae*	Leaves	Costipation
89	Nirgundi	*Vitex penduncularis*	*Verbenaceae*	Seed	Cough
90	Genda	*Tagetes erecta*	*Asteraceae*	Leaves	Swelling
91	Amrud	*Psidium guajava*	*Myrtaceae*	Leaves	Cough
92	Bhilava	*Semecarpusanarcadium*	*Anacardiaceae*	Fruit	Vitiligo
93	Muli	*Raphanus sativus*	*Brassicaceae*	Root	Jaundice
94	Mithi neem	*Murrayakoenigii*	*Rutaceae*	Leaves	Vomiting
95	Ratan jot	*Jatropha curcas*	*Euphorbiaceae*	Seed	Skin disease
96	Gajar	*Daucus carota*	*Apiaceae*	Root	Urinary disorder
97	Kaddu	*Cucurbita pepo*	*Cucurbitaceae*	Seed	Expulsion of worms
98	Shivlingi	*Bryonopsislaciniosa*	*Cucurbitaceae*	Seed	Impotency
99	Kali Rai	*Brassica nigra*	*Brassicaceae*	Seed	Psoriasis
100	Semal	*Bombax malabarium*	*Bombaceae*	Calices	Debility

Continue ...1

101	Ban Kapas	*Azanzalampas*	*Malvaceae*	Root	Syphilis
102	Sitaphal	*Annona squamosa*	*Annonaceae*	Leaves	Diabetes
103	Satyanashi	*Argimonemaxicana*	*Papavaraceae*	Seed	Cough
104	Kikar	*Acacia nilotica*	*Mimosaceae*	Bark	Tonsillitis
105	Jute	*Corchorus olitorius*	*Tiliaceae*	Leaves	Dyspepsia
106	Ankol	*Alangiumsalvifollium*	*Alangiaceae*	Leaves	Itching
107	Kumbhi	*Careya arborea*	*Lecythidaceae*	Bark	Wound healing
108	Nagbel	*Cryptolepisbuchanani*	*Ascleipiadaceae*	Root	Asthma
109	Arul maharukh	*Ailanthus excelsa*	*Simaroubaceae*	Bark	Asthma
110	Ratti	*Abrusprecatorius*	*Fabaceae*	Leaves	Asthma
111	Kakodabel	*Momordica dioica*	*Cucurbitaceae*	Root	Bleeding piles
112	Kanghi	*Abuliton indicum*	*Malvaceae*	Leaves	Vomiting
113	Kirva	*Miliusavelutina*	*Annonaceae*	Leaves	Headache
114	Kuppi	*Acalphya indica*	*Euphorbiaceae*	Leaves	Eye infection
115	Sunamukhi	*Cassia occidentalis*	*Caesalpiniaceae*	Root	Elephantiasis
116	Arjuna	*Terminalia arjuna*	*Combretaceae*	Bark	Heart problems
117	Raimuniya	*Lantana camara*	*Verbenaceae*	Leaves	Headache
118	Khair	*Senegalia catechu*	*Fabaceae*	Bark	Sore throat
119	Punarnava	*Boerhaaviadiffusa*	*Nyctaginaceae*	Whole plant	Asthma
120	Ban Aalu	*Dioscorea esculenta*	*Dioscoreaceae*	Tuber	Rheumatism

State Medicinal Plant Board at Raipur (C.G.) (https://www.nmpb.nic.in) was consulted for cross-validation after the botanical species names of the specimens were confirmed and authenticated utilizing a variety of reference materials about medicinal plants in Chhattisgarh and the region.

Results and Discussion

A total of 120 medicinal plant samples from 59 different families were examined and collected from Saraipali, Mahasamund, Basna, Bagbahra and Pithora blocks of the Mahasamund district of Chhattisgarh, which are utilized by the local populace to treat various diseases of the body (Table 1 and Fig. 1). Among the medicinal plants harvested in the survey, the greatest proportions were trees (39%), and the remaining were herbs, vines and shrubs (Fig. 2). All the medicinal plants harvested in the survey belonged to 59 different families, and the highest numbers were medicinal plants (10) (Fig. 3). Family Fabaceae is a big and heterogeneous family of flowering plants that consists of numerous general food crops like beans, peas, lentils, and soybeans. It is also characterized by having medicinal applications.

Residents of the district use all 120 of the medicinal plant species that have been gathered to treat 72 different types of illnesses, including rheumatic arthritis, asthma, heart disease, gastric issues, cough, cold, fever, skin infection, wound healing, diarrhea, jaundice, headache, and stomach ache. It's have been used to treat insects, with most of the 9 plants being used to treat diabetes (Fig. 4). Majority of the plant parts are utilized by inhabitants of the district for therapeutic purposes, which are mostly made up of the entire plant, its leaves, fruits, seeds, bark, and stem. Various plant parts have been used as crude drugs in the form of paste, juice, or decoction. Traditional healers such as Vaidyas who live in this region of the nation use the indigenous information for curing many such long-standing conditions. Total 18 various plant parts like bark, tuber, flower, gum, fruit etc. employed for disease treatment. Leaves are the most used plant parts for medicinal purposes. The reason is that leaves are easy to harvest and dry, and they have a vast array of

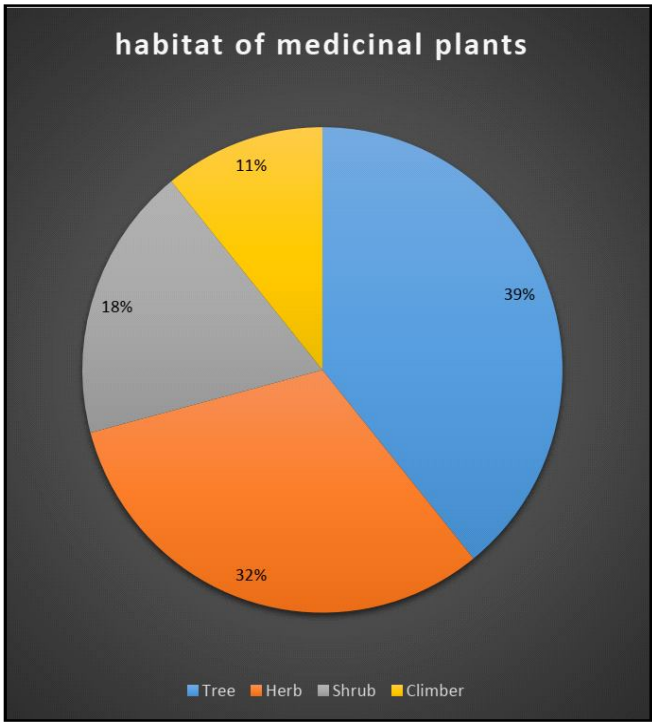

Fig. 2: Habitats of collected plants.

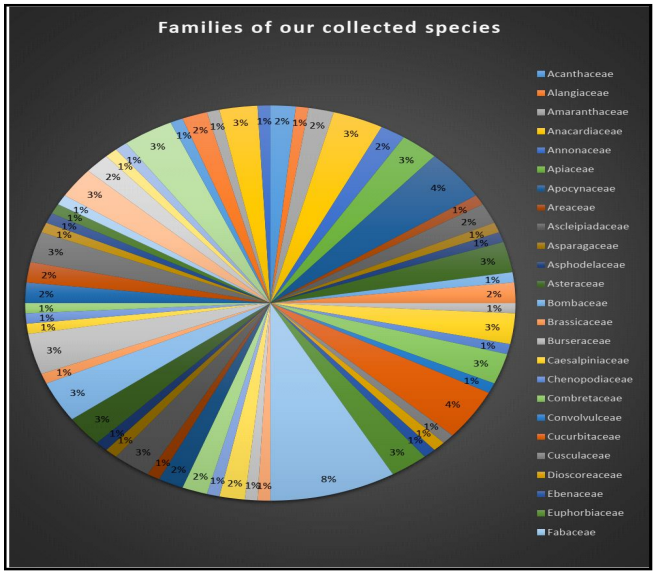

Fig. 3: Families of plants collected.

medicinal compounds (Fig. 5). Previous research in Chhattisgarh also recorded that the tribal people who live in various areas have extensive knowledge of the ethnomedicinal plants and how they are used in different medical procedures.

The ethnomedicinal survey in Mahasamund district of Chhattisgarh was reported by Bhoi *et al.*, in 2023. According to their observations, 79% of the informants learned about the therapeutic application of plants as a treatment for metabolic disorders from the experiences of others. This is a clear representation of the way traditional practices are being transferred from generation to generation. Herbalists (12%) and pharmacists (5%) follow, whereas merely 3.4% acquired this information through reading books on traditional medicine. The major aim of the study was to ensure that available knowledge was utilized appropriately by recording it and establishing a database on it. In their 2014 study of the medicinal plants in Chhattisgarh's Dantewada district, Sahu *et al.*, discovered 104 native plant species that the tribal people used for therapeutic purposes. The study examined the health care system in 15 tribally inhabited villages. The Achnakmar Amarkantak biosphere reserve was surveyed by Mishra *et al.*, in 2017 in order to identify and catalog plants with ethnomedicinal value. The authors identified 70 plants from 37 families that may have ethnomedical value. According to additional reports, medicinal plants are uncommon, endangered, and threatened and need to be conserved. The ethnobotanical survey of Atal Nagar (New Raipur), Chhattisgarh, was reported by Pandey in 2021. In the survey, the authors listed 103 plant species in 40 families and 90 genera. Locals used the plants to treat a variety of illnesses, including blood pressure, skin conditions, asthma, fever, and stomach issues. The ethnobotanical survey of Chhattisgarh's Bijapur District was reported by Darro and Khan in 2021. The authors listed 40 ethnomedical plants from 30 families and 38 genera. Ascelpiadaceae, Acanthaceae, Combretaceae, Fabaceae, Loganiaceae, Solanaceae, Sapotaceae, and Zingiberaceae were the two most prevalent families, followed by Liliaceae and Cucurbitaceae. Many illnesses, including fever, cough, bronchitis, asthma, stomachache, toothache, diarrhea, dysentery, infections, etc., are treated with the medicinal plants mentioned in the study above.

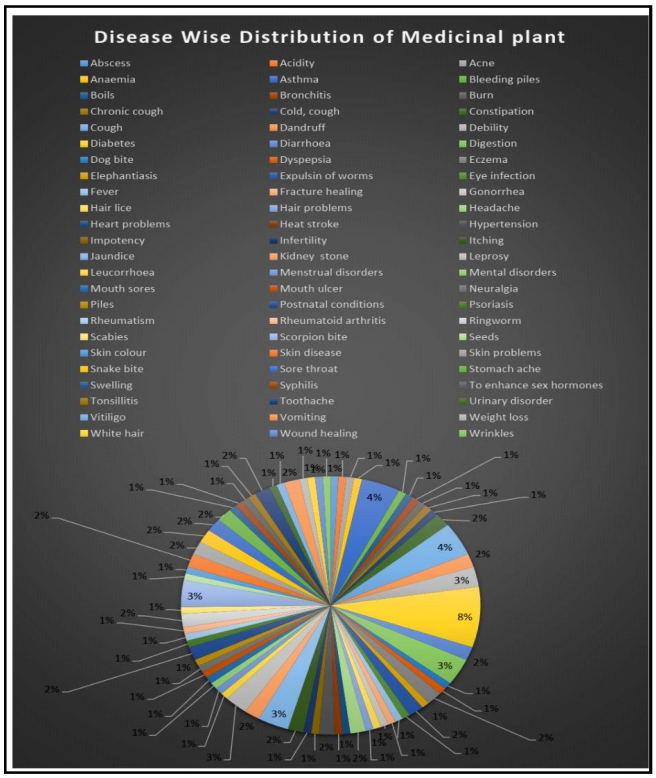

Fig. 4: Disease Wise Distribution of Medicinal plant.

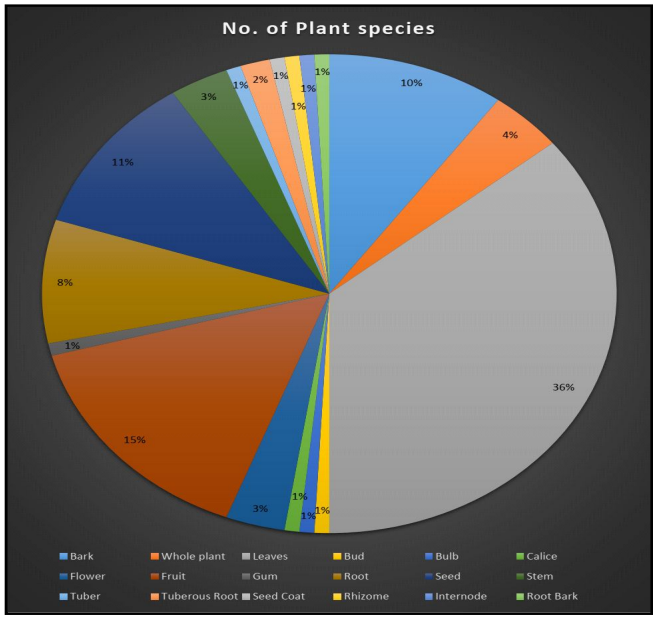

Fig. 5: Plant Parts used for the treatment of diseases.

The Mahasamund district's medicinal plants are also listed in the current study's findings. Because the people of Mahasamund district rely heavily on the forests for a variety of necessities, plants play a role in their daily lives. Tribal people in the villages use the medicinal plants identified in the study to treat a variety of illnesses.

Conclusion

An ethnobotanical survey conducted in Chhattisgarh's Mahasamund district revealed fascinating details about a variety of medicinal plant species and emphasized the documentation of the medicinal plants used by the local tribe. During the study, 120 plant species from 59 families were identified. Which are useful in curing 72 various diseases and infections and all of them are plants, shrub, herbs etc. and with the help of which, the majority of people of various communities of the district until now are free from any type of physical health related ailments. Have survived and are miles apart from dependency upon modern English medicines. The current research is a small documentation effort to raise awareness regarding the impressive medicinal diversity of Mahasamund district. So we can conclude that the traditional indigenous knowledge accumulated over generations is dwindling at a very fast rate in the current period, thus there arises a common urgency to record and save this huge knowledge that will assist in discovering new drugs of therapeutic and medicinal importance. In addition to supporting the sustainable development of forests and tribes, the ethno-medical surveys and research that will be conducted will aid in the documentation and preservation of medicinal plants.

Reference

Ahirwar, R.P. (2017). Ethnobotanical survey of medicinal plants commonly used by tribal person of Tikamgarh district, Madhya Pradesh. *World Journal of Pharmaceutical Research*, **6(7)**, 1085-1107.

Bhoi, S., Gautam S.K. and Sharma D. (2023). Ethnobotanical study of medicinal plants of Mahasamund District, Chhattisgarh. *International Research Journal of Modernization in Engineering Technology and Science*, **5(9)**, 2354-2357.

Chatterjee, A.K. (2014). Study of ethnomedicinal plants among the tribals of Surguja region (C.G.). *International Journal on Advanced Computer Theory and Engineering*, **3(2)**, 56-60.

Chowdhuri, S.K. (2000). From ethnobotany. In D. Mitra & J. Guha (Eds.), *Studies in Botany* (Vol. 2). Manasi Press.

Debbarma, M., Pala N., Kumar M. and Bussmann R. (2017). Traditional knowledge of medicinal plants in tribes of Tripura in Northeast India. *African Journal of Traditional, Complementary and Alternative Medicines*, **14(4)**, 156-168.

Ekka, A. (2013). Some rare plants used by hill-korwa in their healthcare from Chhattisgarh. *International Journal of Life Sciences Biotechnology and Pharma Research*, **2(1)**, 198-203.

Eldeen, I.M.S., Effendy M.A.W. and Tengku-Muhammad T.S. (2016). Ethnobotany: Challenges and future prospectives. *Research Journal of Medicinal Plants*, **10(6–7)**, 382-387.

Hostettmann, K., Marston A., Ndjoko K. and Wolfender J.L. (2000). The potential of African medicinal plants as a source of drugs. *Current Organic Chemistry*, **4(10)**, 973-1010. https://www.nmpb.nic.in

Jain, M., Shrivastava P.N. and Samar R. (2018). Survey of ethnobotanical medicinal plants used by the people of district Guna, Madhya Pradesh. *International Journal of Life Science and Scientific Research*, **4(4)**, 1880-1888.

Kumar, N.S. and Gurusubramanian G. (2011). Random amplified polymorphic DNA (RAPD) markers and its applications. *Science Vision*, **11(3)**, 116-124.

Kushwaha, K. (2020). Conservation of endangered and threatened medicinal plants of Korea district of Chhattisgarh. *International Journal of Pharmacy and Life Sciences*, **11(9)**, 7014-7018.

Mishra, A., Parihar N. and Swamy S.L. (2017). Ethnobotanical study of medicinal plants used by the local communities in AchanakmarAmarkantak biosphere reserve, Central India. *International Journal of Science and Technology*, **3(2)**, 577-587.

Mohan, V.R., Rajesh A., Athiperumalsami T. and Sutha S. (2008). Ethnomedicinal plants of the Tirunelveli district, Tamil Nadu, India. *Ethnobotanical Leaflets*, **12**, 79-95.

Morell, M.K., Peakall R., Appels R., Preston L.R. and Lloyd H.L. (1995). DNA profiling techniques for plant variety identification. *Australian Journal of Experimental Agriculture*, **35(6)**, 807-819.

Nanda, H.C. and Shaw S.S. (2008). Diversity of medicinal and tuber bearing plants in Bastar plateau of Chhattisgarh, India. *Journal of Plant Genetic Resources*, **21(2)**, 98-112.

Newmaster, S.G. and Ragupathy S. (2010). Ethnobotany genomics—Discovery and innovation in a new era of exploratory research. *Journal of Ethnobiology and Ethnomedicine*, **6**, 1-11.

Painkra, V.K., Jhariya M.K. and Raj A. (2015). Assessment of knowledge of medicinal plants and their use in tribal region of Jashpur district of Chhattisgarh, India. *Journal of Applied and Natural Science*, **7(1)**, 434-442.

Pandey, A.L. (2021). An ethnobotanical study of medicinal plants in Atal Nagar (New Raipur) of Chhattisgarh, India. *International Research Journal of Plant Sciences*, **12(1)**, 1-18.

Pimbert, M. and Pretty J. (1995). *Parks, people and professionals: Putting participation into protected area management* (UNRISD Discussion Paper 57). Geneva: UNRISD.

Posey, D. (1992). Traditional knowledge, conservation and

the rain forest harvest. In M. Plotkin & L. Famolare (Eds.), *Sustainable Harvest and Marketing of Rain Forest Products* (46–50). Island Press.

Pradeep Reddy, M., Sarla N. and Siddiq E.A. (2002). Inter simple sequence repeat (ISSR) polymorphism and its application in plant breeding. *Euphytica,* **128(1)**, 9-17.

Puspangadan, P.S. (1995). *Ethno-botany in India: A study report*. Government of India.

Rahul, J. (2013). An ethnobotanical study of medicinal plants in Taindol Village, District Jhansi, Region of Bundelkhand, Uttar Pradesh. *Journal of Medicinal Plants Research,* **1**, 59-71.

Rates, S.M.K. (2001). Plants as a source of drugs. *Toxicon,* **39(5)**, 603-613.

Sahu, P.K., Masih V., Gupta S., Sen D.L. and Tiwari A. (2014). Ethnomedicinal plants used in the healthcare systems of tribes of Dantewada, Chhattisgarh, India. *American Journal of Plant Sciences,* **5(10)**, 1632-1643.

Sharma, R.K. (2017). Study of ethnomedicinal plants used for various ailments of BagichaJashpur (C.G.), India. *European Journal of Biotechnology and Bioscience,* **5(6)**, 41-43.

Sharma, S.D., Sahu K., Chandrol G.K., Jain P.K. and Sharma V. (2016). Ethnobotanical survey of five villages of Durg district of Chhattisgarh (India). *International Journal of Advanced Research in Biological Sciences,* **3(10)**, 104-110.

Sharma, K.S., Rao S.R. and Shamurailatpam A. (2010). DNA-based molecular markers: Concept, techniques and comparison. *Advances in Applied Biotechnology*, 1-22.

Shukla, A.N., Srivastava S. and Rawat A.K. (2010). An ethnobotanical study of Rewa district, Madhya Pradesh. *Indian Journal of Traditional Knowledge,* **9(1)**, 191-202.

Singh, U. and Bharti A.K. (2015). Ethnobotanical study of plants of Raigarh area, Chhattisgarh, India. *International Research Journal of Biological Sciences,* **4(6)**, 36-43.

Vinodia, S., Dixit A.K., Das B., Dhiwar H., Sheikh D.K. and Kerketta M.A. (2019). Traditional phytotherapy among the Gond tribes of Janjgir-Champa, Chhattisgarh (India). *Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences,* **5(1)**, 765-772.

Wanjohi, B., Sudoi V., Njenga E. and Kipkore W. (2020). An ethnobotanical study of traditional knowledge and uses of medicinal wild plants among the Marakwet community in Kenya. *Evidence-Based Complementary and Alternative Medicine,* 1-8.