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TRADITIONAL USES AND ETHNO-MEDICINAL PLANTS: INSIGHTS FROM THE KORBA DISTRICT OF CHHATTISGARH, INDIA

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ABSTRACT

The state of Chhattisgarh has a very wide variety of ethno-medicinal plants. Over the past thirty years, a large number of ethnobotanists have gathered information on medicinal plants from across the nation. Chhattisgarh state truly has a wealth of natural beauty, rich history, and diverse cultures. Many prominent tribes, including as the Pardhi, Bhariya, Mandia, Kamar, Bhatara, Oraon, Binjhuar, Kanwar, Korwa, Binjhuar, Baiga, Bhumia, Agariya, and Gond, are found in the state. These tribes' rural and hilly terrain gives them access to a wide range of medicinal plants and objects, which they utilize to treat ailments in both humans and animals. This technique can be used to extract a chemical from plant matter that has therapeutic use. The present Ethno-medicinal plants documentation and utilization pattern indicates rich traditional knowledge on medico-botanical aspects of the study area by aboriginal communities of Chhattisgarh and as diverse ethno-medicinal plant species were actively harbored and maintained in the Chaturgarh forest by the inhabitants for their primary health care and well-being that usually were supplemented prior to modern health care system. Diverse ethno-medicinal plant species being maintained in the forest area is significant in conservation of these species that too in a human dominated landscape when these plant species are threatened for existence due to habitat destruction and mining exploitation in their natural habitats.

Key words : Species richness, Ethno-medicinal plants, Traditional healers, Forests.

Introduction

The Chaturgarh Forest Reserve spans around one-third of the territory in the state's Korba district. The district is bordered on the north by Sarguja and Koriya, on the east by Raigarh, on the west by Bilaspur, and immediately south by Janjgir-Champa. The climate of the Korba is humid subtropical. Winters are pleasant, while summers are oppressive. Thus, in the Chaturgarh Forest of Chhattisgarh, this study investigates the taxonomy and ethno-medicine of wild herbaceous species (Thakur *et al.*, 2023). Anthropogenic causes are primarily responsible to deteriorating and land use changes in our native biodiversity and impact on species composition and vegetation in tropics, which in turn alarmingly enhance the emissions of GHGs in the atmosphere and contributing for global warming (Thakur *et al.*, 2022a, b,c; Rawat *et al.*, 2022). Changes of vegetation and habitat loss have currently emerged as ecological aspects, posing a serious

challenge for conservation of rapidly eroding biodiversity of tropical forest ecosystems (Thakur, 2018; Thakur *et al.*, 2021a). Anthropogenic activities like logging, clearing, burning, along with expression of agriculture and rural settlements etc. have dramatically increased over the last couple of decades witnessed an extensive forest loss and enhanced fragmentation across the tropical landscapes (Ramachandra *et al.*, 2016). Forest fragmentation is a progressive process of conversion of large sized undisturbed forests into small remnant patches which decline intact contiguous forest cover, increase forest edge and isolates remaining patches in a forested landscape (Bustamante *et al.*, 2003; Reddy *et al.*, 2013; Carranza *et al.*, 2015).

Vegetation analysis is an important tool to study species composition and phyto-sociological structure of the plant community. It helps to quantify various lands, conservation management of endangered species, soil

and water (Kumar *et al.*, 2022). Vegetation analysis plays a very important role in adaptation of plants to future climate change (Pandey *et al.*, 2022). Hence, the structural composition of forest vegetation has strong efficient role in regulating numerous and vital key ecosystem processes. The various vegetation communities an ecosystem largely regulates the energy exchange, CO₂ and mass between plant canopies and thus plays a vital role in regulating atmospheric concentrations of CO₂ and in turn useful in understanding carbon budgets of an ecosystem (Bonan, 1993). In view of this, it becomes essential to determine the structure and the composition of a forest type, diversity and the spatial arrangements, before addressing any functional ecological and biophysical processes of an ecosystem like Net Primary Production (NPP), evapotranspiration, energy exchange and biomass allocation patterns. It is also important for silvicultural management of forest resources on sustainable basis. The structure of vegetation enables to devise suitable management practices to obtain higher rate of volume growth/ biomass production and also to achieve maximum economic returns per unit area within a given period. In view of the above, the importance of structural inputs for ecosystem analysis at different spatial scales have been well recognized and employed in several studies (Singh *et al.*, 2020; Darro *et al.*, 2021; Thakur *et al.*, 2022).

The term “flora” generally refers to medicinal, taxonomic and herbal plants that are found in a particular region, ecosystem, or historical era. India is a hotspot for biodiversity, with a wide variety of plants and animals living there. India, with a population of over a billion, is the 12th most ethnically and culturally diverse nation in the world. India has some of the most diverse flora in the world due to its varying topography, temperature, and geography. More than 17,000 species of flowering plants, including medicinal, herbal, taxonomic, and other varieties, are thought to be found in India, making up 7% of all flowering plant species worldwide (Bijalwan and Thakur 2010; Darro *et al.*, 2020; Mishra *et al.*, 2021; Dutta *et al.*, 2022). The World Health Organization (WHO) has classified over 22,000 plant species as therapeutic plants. The Botanical Garden of Kew estimates that there are between 223,000 and 450,000 blooming plants. Kew scientists employed expert analysis in a 2008 study to arrive at a more precise estimate of 352,000. However, there are still a lot more taxonomically and medicinally significant plant families that need to be recognized; at this moment, the true count is probably higher than 400,000. There is always the possibility of discovering new plant species and the potential extinction of others.

But because scientists are always changing how they classify plants, the precise amount is never the same. In India, more than 4,000 types of flowering plants are used for approximately 500 for fibres, 400 for fodder, 300 for gum, 3,000 for food, 700 for traditional religious and social usage and roughly 100 for medical purposes. Essential oils and perfumes are extracted from a range of species (Thakur and Thakur, 2014; Thakur *et al.*, 2017, 2019, 2020; Verma *et al.*, 2017; Thakur *et al.*, 2021b; Singh *et al.*, 2021; Mansoori *et al.*, 2020, 2022; Sahoo *et al.*, 2021; Tariyal *et al.*, 2022). Thanks to India’s rich biosphere, over a dozen novel chemicals and life-saving drugs have been found. Medicinal plants are extensively found throughout India and constitute an important part of the nation’s vegetation. Finding new and secure medicinal drugs by doing pharmacological evaluations on compounds produced from plants is one tried-and-true method. The value of traditional health systems and beneficial flora in easing global health concerns is receiving more and more attention. This increased interest has led to an explosion in the study of medicinal plants worldwide, often at the expense of native populations and their natural habitats in their countries of origin. Most underdeveloped countries have deeply embedded traditional medicine into their cultural practices. Ninety percent of the pharmaceutical needs of emerging nations like India are met by their pharmacies. India is the most populous nation on earth and the leading manufacturer of herbal medicines used to treat medical conditions in people. For most of our people living in rural and tribal areas, medicinal plants are the only easily accessible source of healthcare. 64% of people on the planet still receive treatment using traditional methods (Kumar *et al.*, 2022). Approximately 85% of people living in rural areas lack access to a healthcare system.

In various districts of Bangladesh’s Chittagong division, Anup Kumar Dey and colleagues (2014) carried out an ethnobotanical assessment of medicinal plants utilized by indigenous people and traditional healers. They collected data on plants used to treat gastrointestinal (GI) diseases, skin issues, and sexual dysfunction. Pankaj K. Sahu *et al.* (2014) looked into the ethno-medicinal plants used in the health care systems of the tribes in Dantewada, Chhattisgarh, India. Yin-Yin Siew *et al.* (2014) helped with the utilization of fresh medicinal plants in Singapore and found that 414 plants in this area are medicinal based on in-person interviews.

Area of the Salt Range and Soan Valley in Pakistan; Khan *et al.* (2014) examined the ethno-ecological relevance of floristic variation in a northern Pakistani Himalayan valley, with particular attention to the species

that were highlighted. They argued that developing locally relevant conservation strategies can be aided by an awareness of the floristic features and ecological markers of sensitive alpine ecosystems. Nawash *et al.* (2014) looked at the floristic traits and ethno-botanical uses of mediterranean woodland plants in northern Jordan. One of their main priorities was including the community in the development and implementation of ecological restoration projects.

In the Nawarangpur district of Odisha, India; Dhal *et al.* (2014) conducted ethnobotanical research and collected 69 medicinal plants. In the state of Chhattisgarh; Madharia and Jahan (2015) conducted research on the conservation of ethno-medicinal plants. Jahan, Aafreen and Madharia, Preeti (2015) are the Chhattisgarh region has a wide variety of medicinal plants, and several popular ones that are used in traditional and alternative medicine in the region's hotspots were assessed. In 2015, Upasana, and Bharti conducted research on ethno-medicinal plants in the Raigarh district of Chhattisgarh. They recorded and documented their findings on 89 kinds of medicinal plants that are also helpful for food. The study involved Misganaw, Meragiaw *et al.* (2016). 133 ethno-medicinal plants were identified at Delanta, Northwestern Wello, Northern Ethiopia, based on a market survey of the local populace, group discussions, and information on the level of ethnobotanical knowledge of therapeutic plants and the consequences of resettlement.

Anup (2016) collected more than 30 species of medicinal plants from 20 different families through staff interviews for his ethnobotanical study on medicinal plants in the Bhiwani region of Haryana, India. The medicinal plant diversity of Pt. Ravi Shankar Shukla University in Raipur, Chhattisgarh was examined by researchers Rashmi and Ekka (2016). They identified 184 plants from 68 different families that were effective in treating a range of ailments in humans and animals odder as well as other applications.

Many other researchers have worked in the field of ethno-medicine in various regions, including Sinha (2018), Tharanga *et al.* (2018), Kurre (2015) and Sharma (2017). They have been given knowledge of various ethnomedicinal herbaceous, climber, and tree plants that are useful for treating various illnesses of local villagers and inhibited tribes in many regions. There are uncommon and widely used ethno-medical herbs.

According to Biswas *et al.* (C) in this book, "herbal healers" in the district used a wide variety of plant species from different families to treat cancer.

Materials and Methods

The methods and approaches used for the ethnobotany research in the Chhattisgarh Forest Division, Korba district, Chhattisgarh, India, were largely in line with those published by Martin (1995), Jain (1981, 1987 and 1989), Chadwick and Mars (1994). In this case, the study was conducted in the years 2018 and 2021. To be more precise, it is the outcome of substantial fieldwork conducted in the interior tribal pockets of the forest regions that comprise the Chaturgarh forest. The viadys, tribal people and villagers who had inherited this knowledge from their ancestors were consulted regarding the medicinal herbs. Forest range by forest range, this data was gathered. Gathering information from them is a difficult procedure since they consider it to be a very important secret that has never even been discussed among society's members or even shared with their own children. Because they are familiar with the area flora, local healers practicing traditional medicine were asked to help with the ethnobotanical data collection during the fieldwork. Questions were raised on the types of plants they use and how they employ them in their daily lives.

Further information was obtained on the plant specimens—which included specimens of various plants, medicinal herbs and plant parts—that had previously been gathered and kept in the homes of the tribal community's citizens. Close observation was also used to do research on their manner of life, kind of housing, agricultural practices, manners, customs, and festivals, as well as the production of alcoholic beverages, religious beliefs, and edible wild plants found in this region. Not only are plants with possible medicinal applications collected from the many sites visited during the fieldwork, but economically valuable plants are also collected.

Geography of study area

The field of inquiry the coordinates of Chaturgarh are 82° 16' 17.04" E and 22° 30' 37.08" N. According to the Indian Archaeological Survey, it is a monument Chaturgarh is one of the thirty-six forts in Chhattisgarh. Pali city is located 21 kilometres (13 miles) and Korba is located 70 kilometres (43 miles) south of Chaturgarh. Situated at a height of 3,060 feet (930 m), Chaturgarh, also known as Lafagarh, is a hilltop city. Protected by thick natural walls, it is one of the strongest natural forts. The district is situated in the Northern Rocks region of the state. On the Korba-Bilaspur route in the Korba district of Chhattisgarh, India, there are 51 miles separating Chaturgarh from Katghora Tehsil is illustrated in Fig 1.

Identification of plants

With the aid of conventional floras of central India,

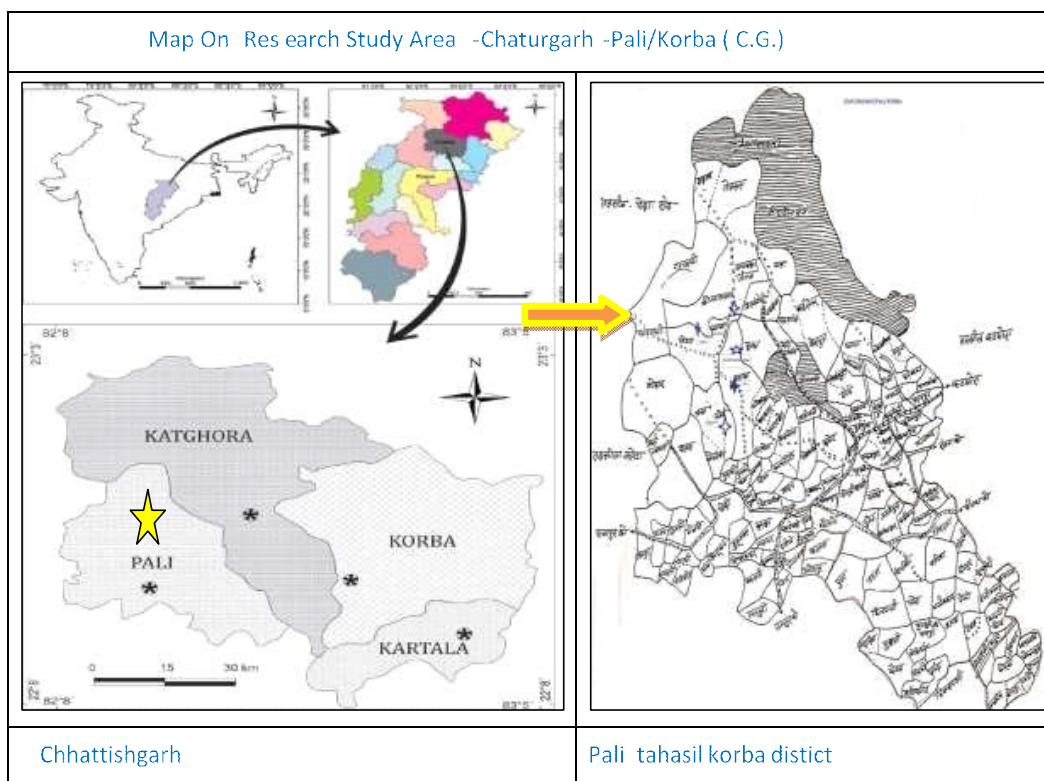


Fig. 1 : Layout map of the study area.

which used field observations as the main source of knowledge, the plant identifications were finished. The Chhattisgarh University Herbarium, which oversees the Botany Department, received each specimen. The information about medicinal plants was gathered in great depth and included details about the plant itself, the portion of the substance that is beneficial, the technique used to make the medicine (including drug preparation, administration, and dose), as well as the drug's collection, processing, and administration. During our subsequent visits, we followed up with the same questions to the tribe members, being sure to record their answers so we could confirm the information they had given. The data they supplied was contrasted with the data already obtained from the several visits to the area in question. A thorough documentation of the knowledge pertaining to the several ethnobotanical plants used by the indigenous tribal people of Chaturgarh Forest Division for food, shelter, dye, and gum has also been made. These plants are used in many different ways by the indigenous tribal people. The applications reported by the tribes were compared and thoroughly screened with important studies have been attempted by several researchers (Thakur *et al.*, 2014; Kumar *et al.*, 2017a,b,c; Thakur *et al.*, 2019; Barya *et al.*, 2020a,b; Mishra *et al.*, 2021, 2022; Thakur *et al.*, 2024).

Results and Discussion

The details of ethno-medicinal plant species documented during the study of Korba district forests are depicted in Table 1. The ancient knowledge of ethno-medicine among the Baigas is verbally passed down from one generation to the next through poetry and odes, much like it is in other tribal groups. Oral transmission is the main way that folk traditions are passed down from one generation to the next, according to Mashelkar (2002). Hundreds of years of successful and unsuccessful family-level testing have resulted in the traditional beliefs, attitudes and practices that comprise folk medicine. Oral traditions transmit these through the years, and they are sometimes called "home remedies," "folk remedies," or "people's health cultures." As to the research conducted by Johari and Karki (1999), "Generally speaking. The people or families who have preserved herbal folklore are those who have inherited their knowledge orally through intergenerational traditions. This information is usually considered a precious family heirloom and is not available to the rest of the group to which the practitioner belongs. According to Saraswati's (1987) research, "The indigenous people of this area gained their knowledge of the various herbal preparations via observation and experimentation. Word of mouth is the primary mode of information transmission for the empirical knowledge", it is therefore very likely to be misplaced or forgotten. The

Table 1 : Ethno medicinal plants and their traditional uses.

S. no.	Botanical names	Family	Used against disease
1.	<i>Abelmoschus crinitus</i> Wall.	Malvaceae	Male sexual disorders, kidney disease
2.	<i>Acacia nilotica</i> (L.) Delile.	Fabaceae	Boil, tongue eruption
3.	<i>Acanthospermum hispidum</i> DC.	Asteraceae	Jaundice,
4.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Scorpion bite, snake bite, cold
5.	<i>Acorus calamus</i> L.	Acoraceae	Cough, cold
6.	<i>Adina cordifolia</i> (Roxb.) Brandis	Rubiaceae	Malaria
7.	<i>Aegle marmelos</i> (L.) Correa	Rutaceae	Abdominal discomfort, acidity, burning sensation while urination, Constipation
8.	<i>Ageratum conyzoides</i> L.	Asteraceae	Itchin
9.	<i>Ailanthus exelsa</i> Roxb.	Simaroubaceae	Malaria, body pain
10.	<i>Alangium salviifolium</i> (L.f.) Wangerin	Alangiaceae	Sciatica, dogbite, wounds, boil
11.	<i>Aloe vera</i> (L.) Burm.f.	Xanthorrhoeoideae (Asphodelaceae)	Dandruff, skin wounds, maintain a healthy body weight, Rheumatism
12.	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	Diarrhoea, malaria
13.	<i>Alternanthera sessilis</i> (L.) R.Br.ex DC.	Amaranthaceae	Earache, increase lactation, cancruid, inflammation, boil
14.	<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	Constipation, cancruid
15.	<i>Amaranthus viridis</i> Linn.	Amaranthaceae	Constipation, cancruid
16.	<i>Amorphophallus konjac</i> K.Koch	Araceae	Eczema, cancer
17.	<i>Andrographis echinoides</i> (L.) Nees	Acanthaceae	Snake bites (cobra)
18.	<i>Andrographis paniculata</i> (Burm. fil.) Nees	Acanthaceae	Intestinal worms
19.	<i>Annona reticulatalinn</i>	Annonaceae	Boils, ulcers, diarrhea, dysentery, toothache
20.	<i>Annona squamosa</i> Linn.	Annonaceae	Lice, abortifacient
21.	<i>Anogeissus latifolia</i> (Roxb.exDC.) Bedd	Combretaceae	Cough, fever, scorpion sting
22.	<i>Antidesma acidum</i> Retz (<i>Antidesma diandrum</i>)	Phyllanthaceae	Body pain, laxative
23.	<i>Argemone mexicana</i> Linn.	Papaveraceae	Scabies, hydrocele, mumps
24.	<i>Artocarpus lacucha</i> Buch.-Ham. exD.Don (<i>Artocarpuslakoocha</i>)	Moraceae	Body pain, mumps, spleen disease
25.	<i>Asparagus racemosus</i> Willd.	Asparagaceae	Milk secretion in woman, gastric, duodenal ulcers
26.	<i>Averrhoa carambola</i> L.	Oxalidaceae	Chicken-pox, ringworm, headache, fever, malaria, antidote for poison
27.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Contraceptive, smallpox, worms, skin diseases, eczema.
28.	<i>Bambusa bambos</i> (L.) Voss	Poaceae	Eye wash, cough and cold, anthelmintic, astringent, ring worm, bleeding gum, joint pain, cuts and wounds, abortifacient, earache
29.	<i>Basella alba</i> L.	Basellaceae	Alleviate labour pain, catarrh, boils, urticarial, burns, swelling

Table 1 continued...

Table 1 continued...

30.	<i>Bauhinia purpurea</i> L.	Fabaceae	Antidiarrheal, anti-dysenteric, astringent, antidote
31.	<i>Bauhinia vahlii</i> Wight & Arn.	Fabaceae	Diarrhoea, boil
32.	<i>Benincasa pruriens</i> f. <i>hispida</i> (Thunb.) de Wilde & Duyfjes (<i>Benincasa hispida</i>)	Cucurbitaceae	Constipation, colic pain, aphrodisiac, diuretic, antiperiodic, heart disease, TB, and tapeworm
33.	<i>Bombax ceiba</i> Linn.	Malvaceae	Fertility
34.	<i>Boswellia serrata</i> Roxb.ex Colebr.	Burseraceae	Rheumatism, gastric, anaemia, asthma
35.	<i>Brassica juncea</i> (L.) Czern.	Brassicaceae	Headache, tumours, galactagogue, skin eruptions, ulcer
36.	<i>Breyniavitis-idaea</i> (Burm.f.) C.E.C. Fisch.	Euphorbiaceae	Skin Problems
37.	<i>Buchanania lanzanspreng</i>	Anacardiaceae	Skin disease, blood diseases, digestive, expectorant, aphrodisiac, purgative, analgesic
38.	<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	Intestinal worms, erectility's function diarrhoea, dysentery,
39.	<i>Butea superb</i> Roxb.	Fabaceae	Sleeplessness, contraceptive, aphrodisiac
40.	<i>Cajanus scarabaeoides</i> (L.) Thouars (<i>Atylosia scarabaeoides</i>)	Fabaceae	Helminths, stomach-ache, kidney stone, leucorrhoea
41.	<i>Calotropis procera</i> (Ait.) Ait.fil.	Apocynaceae	Lepros, elephantiasis, malaria, scorpion sting
42.	<i>Cannabis sativa</i> Linn.	Cannabinaceae	Dandruff, wounds, sores, photophobia, piles
43.	<i>Careya arborea</i> Roxb.	Lecythidaceae	body ache, wounds., fish poisoning, cold , cough, syphilis
44.	<i>Carissa carandas</i> Linn.	Apocynaceae	Flatulence, malignant ulcer, cancerous wounds, hysteria, jaundice, cattle sores
45.	<i>Cassia fistula</i> L.	Fabaceae	Jaundice
46.	<i>Catharanthus roseus</i> (L.) G. Don	Apocynaceae	Bee sting, wasp sting, indigestion
47.	<i>Celastrus paniculatus</i> Willd.	Celastraceae	Skin diseases, gout, rheumatism, arthritis, inflammation, paralysis
48.	<i>Celosia argentea</i> var. <i>argentea</i> (<i>Celosia argentea</i>) Linn.	Amaranthaceae	Menorrhagia, blood dysentery, anti-diarrhoeal, stomatitis, cooling
49.	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	Wounds, Chickenpox, boils
50.	<i>Chloroxylon swietenia</i> (Roxb.) DC.	Rutaceae	Pests, insects
51.	<i>Cinnamomum tamala</i> (Buch.-Ham.) Th. G. G. Nees	Lauraceae	Anti-diarrhoeal, anti-rheumatic, hypoglycaemic
52.	<i>Cissus adrangularis</i> Linn.	Vitaceae	Bone fracture, leucorrhoea
53.	<i>Citrus aurantifolia</i> (L.)	Rutaceae	Menorrhagia, tuberculosis
54.	<i>Citrus maxima</i> (Burm. f.) Osbeck	Rutaceae	Rangbad
55.	<i>Colocasia esculenta</i> (L.) Schott	Araceae	Scorpion sting, snakebite, difficult child birth, haemorrhage, rheumatism
56.	<i>Corchorus capsularis</i> Linn	Malvaceae	Stomachic, carminative, anti-dysenteric, purgative
57.	<i>Crotalaria juncea</i> Linn.	Fabaceae	Paralysis, diarrheal, smallpox
58.	<i>Cucurbita maxima</i> Duch.	Cucurbitaceae	diuretic, tonic, inflammations, anthelmintic, diuretic
59.	<i>Curculigo orchioides</i> Gaertn.	Hypoxidaceae	Energy stimulant, skin diseases

Table 1 continued...

Table 1 continued...

60.	<i>Curcuma longa</i> L.	Zingiberaceae	Cough, eczema
61.	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Bones fractured, Piles
62.	<i>Cymbopogon citratus</i> (DC.) Stapf	Poaceae	Jaundice, aromatherapy, cold, diuretic, abortifacient
63.	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Cuts, Wounds, leucorrhoea
64.	<i>Cyperus rotundus</i> Linn.	Cyperaceae	Malaria, snake bites
65.	<i>Dalbergia sissoo</i> DC.	Fabaceae	Semen, dysentery
66.	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	Loranthaceae	Anti-fertility
67.	<i>Desmodium oojeinense</i> (Roxb.) H. H.Ohashi	Fabaceae	Malaria, leucorrhoea, spermatorrhoea
68.	<i>Dioscorea alata</i> L.	Dioscoreaceae	Cramps, muscle tension
69.	<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	Constipation, abdominal pain
70.	<i>Diospyros melanoxylon</i> Roxb.	Ebenaceae	Diarrhoea, filarial
71.	<i>Diplocyclos palmatus</i> (L.) C. Jeffrey	Cucurbitaceae	Fertility of boy child
72.	<i>Elephantop usmollis</i> Kunth (<i>Elephantop usscaber</i> L.)	Compositae	Round worms, coughs, venereal diseases, vomiting, dropsy
73.	<i>Eleusine coracana</i> (L.) Gaertn.	Poaceae	Vaginal bleeding.
74.	<i>Equisetum ferrissii</i> Clute. (<i>Equisetum hyemale</i>)	Equisetaceae	Broken limbs, arthritis.
75.	<i>Eucalyptus gunnii</i> Hook.f.	Olaceae	Mucus, cough, cold
76.	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Dysentery, colic, asthma, chronic bronchial, vomiting, gastric, increase flow of milk
77.	<i>Ficus benghalensis</i> Linn.	Moraceae	Seminal weakness, impotency
78.	<i>Ficus tsjahela</i> Burm.f.	Moraceae	Diarrhoea, dysentery
79.	<i>Ficus racemosa</i> Linn.	Moraceae	Haemorrhoids, impotent men and barren women, cancer
80.	<i>Ficus religiosa</i> Linn.	Moraceae	Vomiting, mouth sores, asthma
81.	<i>Flemingia chappar</i> Benth.	Fabaceae	leucorrhoea, spermatorrhoea, amenorrhea, goitre
82.	<i>Flemingia strobilifera</i> (L.) W.T. Aiton	Fabaceae	Hydrocele, amenorrhea, dysentery
83.	<i>Garuga pinnata</i> Roxb.	Burseraceae	Bone fracture
84.	<i>Gloriosa superba</i> L.	Colchicaceae	skin eruptions, baldness, painful delivery, lice
85.	<i>Gmelina arborea</i> Roxb.ex Sm	Lamiaceae	Small pox.
86.	<i>Gossypium arboreum</i> Linn.	Malvaceae.	menstrual problem, increase lactation, ear pain, suppressed urination
87.	<i>Guizotia abyssinica</i> (L.f.) Cass	Asteraceae	Arthritic
88.	<i>Helictre sisora</i> L.	Malvaceae	Snake bite
89.	<i>Hellenia speciosa</i> (J. Koenig) S.R. Dutta (<i>Costus Speciosus</i>)	Coastaceae	Pneumonia, rheumatism, Urinary diseases jundice
90.	<i>Hemidesmus indicus</i> (L.) R. Br.	Apocynaceae	Skin diseases, menorrhagia
91.	<i>Hibiscus cannabinus</i> L.	Malvaceae	Helminthic, diarrhoea

Table 1 continued...

Table 1 continued...

92	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Menstruation, gonorrhoea, menorrhagia
93	<i>Hibiscus sabdariffa</i> L.	Malvaceae	Cold, catarrhs
94	<i>Holarrhena pubescens</i> Wall. (<i>Holarrhena antidysenterica</i> L.)	Apocynaceae	Eczema, Flatulence
95	<i>Hymenodictyon orixense</i> (Roxb.) Mabb. (<i>Hymenodictyon excelsum</i> Wall.)	Rubiaceae	Fever, malaria
96	<i>Hyptis suaveolens</i> (L.) Poit.	Lamiaceae	Mosquitoes repellent, antiseptic, headache, nose bleeding
97	<i>Indigofera cassioides</i> DC.	Fabaceae	Constipations, abortion
98	<i>Ipomoea batatas</i> (L.) Lam.	Convolvulaceae	Tumour, astringent
99	<i>Jatropha curcas</i> Linn.	Euphorbiaceae.	Ringworm, animal bites
100	<i>Justicia adhatoda</i> L. (<i>Adhatoda vasica</i> Nees.)	Acanthaceae	Dysentery, cough, cold
102	<i>Justicia gendarussa</i> Burm. fil.	Acanthaceae	Jaundice, dysentery, rheumatism
103	<i>Lagenaria siceraria</i> (Mol.) Standl.	Cucurbitaceae	Headache, pimples, baldness, stomach acidity, antidote, boils
104	<i>Lantana camara</i> Linn.	Verbenaceae	Hydrocele, typhoid and malaria.
105	<i>Lawsonia inermis</i> Linn.	Lythraceae	Burn wounds, boil, leucorrhoea, spermatorrhoea, hair growth
106	<i>Leea indica</i> (Burm. f.) Merr.	Vitaceae	Dysentery
107	<i>Leonotisne petiifolia</i> (L.) R.Br.	Lamiaceae	Cut, wounds
108	<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	Snakebite, fever, headache, insect-stings, asthma, skin disease
109	<i>Linnophila repens</i> (Benth.) Benth. (<i>Linnophila conferta</i> Benth.)	Plantaginaceae	Gastric, intelligence in kids
110	<i>Litchi chinensis</i> Sonn.	Sapindaceae	Diarrheal, gargle, neuralgic disorders
111	<i>Ludwigia octovalvis</i> (Jacq.) P.H. Raven (<i>Jussiaeasuf fruticosa</i> L.)	Onagraceae	Headaches, swollen
112	<i>Ludwigia perennis</i> Linn.	Onagraceae	Diuretic, constipation
113	<i>Luffa acutangula</i> (L.) Roxb.	Cucurbitaceae.	Haemorrhoids, leprosy, eye secretion
114	<i>Luffa cylindrica</i> (L.) Roem.	Cucurbitaceae	Cooling, cathartic
115	<i>Lygodium palmatum</i> Bernh.sw.	Lygodiaceae	Gastric problem, abortion
116	<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.) A.Chev. (<i>Bassia latifolia</i>)	Sapotaceae	Dog bite
117	<i>Mallotus philippinensis</i> (Lam.) Mull. Arg.	Euphorbiaceae	Cut, wound, anthelmintic
118	<i>Mangifera indica</i> L.	Anacardiaceae	Warts, colds, coughs, diarrhoea, homeostatic, antirheumatic
119	<i>Marsilea quadrifolia</i> Linn.	Marsiliaceae	Laxative, insomnia
120	<i>Martynia annua</i> Linn	Martyniaceae	Scabies, eczema, bone cancer
121	<i>Melia azedarach</i> L.	Meliaceae	Astringent, stomachic, fever, piles
122	<i>Meyna spinosa</i> Roxb. ex Link (<i>Vangueria spinosa</i> Roxb. <i>Vangueria spinosa</i> var. <i>mollis</i> Hook.)	Rubiaceae	biliary complaints, hepatic congestion, dysentery

Table 1 continued...

Table 1 continued...

123	<i>Mimosa pudica</i> L.	Mimosaceae	Antidote
124	<i>Momordica charantia</i> L.	Cucurbitaceae	Cholera, piles,
125	<i>Moringa oleifera</i> Lam (<i>Moringa Pterigo sperma</i> (Gaertn.))	Moringaceae	Headaches, earaches, painkiller, control sugar levels, swelling
126	<i>Morus alba</i> L.	Moraceae	Control sugar level, blood pressure
127	<i>Mucuna pruriens</i> (L.) DC.	Fabaceae	Haemorrhage
128	<i>Mukia maderaspatana</i> (L.) M. Roem. (<i>Melothriam aderaspatana</i> (L.) Cogn.)	Cucurbitaceae	Improve memory
129	<i>Murraya koenigii</i> (L.) Spreng.	Rutaceae	Nausea, vomiting, burned skin, cracked skin, boils, diarrhoea, dysentery
130	<i>Nerium oleander</i> Linn. (<i>Nerium indicum</i> Mill.)	Apocynaceae	Scabies, swellings, tumours, leprosy, skin diseases.
131	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Cough, antifertility, ringworm, skin diseases
132	<i>Nymphaea nouchali</i> var. <i>pubescens</i> (Willd).Hook.fil. & Thomson (<i>Nymphaea pubescens</i>)	Nymphaeaceae	Goitre
133	<i>Ochna obtusata</i> DC.var. <i>Pumila</i> (DC)	Ochnaceae	Malaria, diabetes
134	<i>Ocimum tenuiflorum</i> Linn (<i>Ocimum sanctum</i>)	Lamiaceae	Cough
135	<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	Body ache, dog bites
136	<i>Phoenix sylvestris</i> (L.) Roxb.	Arecaceae	Tooth ache, urinary disorders, digestive disorders & ulcer
137	<i>Phyllanthu semblica</i> L. (<i>Embllica officinalis</i>)	Phyllanthaceae	Dysentery, asthma, bronchitis, urinary diseases
138	<i>Physalis peruviana</i> L.	Solanaceae	Jaundice, glaucoma
139	<i>Piper nigrum</i> Linn.	Piperaceae	Cold, cough
140	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	Gonorrhoea, cold, cough, diarrhoea, dyspepsia, flatulence, leprosy, wounds
141	<i>Premna herbacea</i> Roxb.	Lamiaceae	Arthritis, spermatorrhoea
142	<i>Psidium guajava</i> L.	Myrtaceae	Dysentery, diarrhoea, ringworm, wounds, ulcers, diabetes
143	<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	Ear disease, diabetic, anaemia, dysentery
144	<i>Putranjiva roxburghii</i> Wall.	Putranjivaceae	Evil eyes, spirits
145	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Wounds, inflammation ,for hydrocele, obesity, kidney stone
146	<i>Salix alba</i> L.	Salicaceae	Inflammation, sciatica, neuralgia
147	<i>Schleichera oleosa</i> (Lour.) Oken	Sapindaceae	Back pain, rheumatism, skin diseases
148	<i>Scoparia dulcis</i> L.	Plantaginaceae	Nostril bleeding, jaundice, abdominal pain, menstruation
149	<i>Semecarpus anacardium</i> L. f.	Anacardiaceae	Leprotic, tuberculosis, pest repellent, evil eye, evil spirit
150	<i>Senegalia catechu</i> (L.f.) P.J.H. Hurter &Mabb. (<i>Acacia catechu</i>)	Fabaceae	Diarrhoea, dysentery, night blindness
151	<i>Senna hirsuta</i> (L.)H.S. Irwin & Barneby	Fabaceae	Skin disorders, cracked nipples

Table 1 continued...

Table 1 continued...

152	<i>Senna obtusifolia</i> (L.) H.S. Irwin & Barneby. (<i>Cassia tora</i> Linn.)	Fabaceae	Cuts, skin disease, eczema, diabetes
153	<i>Senna occidentalis</i> (L.) Link (<i>Cassia occidentalis</i>)	Fabaceae	Eye inflammations, gastric, increase lactation, whooping cough, wounds, sores, itch
154	<i>Sesamum indicum</i> Linn.	Pedaliaceae	Skin infection, white hair
155	<i>Shorea robusta</i> Gaertn.	Dipterocarpaceae	Diarrhoea, dysentery, diabetes, indigestion
156	<i>Sida acuta</i> Burm.f.	Malvaceae	Malaria, elephantiasis
157	<i>Smilax ovalifolia</i> Roxb. ex D. Don (<i>Smilax macrophylla</i> Roxb.)	Smilacaceae	Skin problem, swellings, abscesses
158	<i>Smithia conferta</i> J.E.Sm.	Fabaceae	Abortification
159	<i>Solanum virginianum</i> Linn. (<i>Solanum xanthocarpum</i> S. & W., <i>S. surattense</i> Roxb.)	Solanaceae	Cold, cough, whooping cough, pneumonia
160	<i>Soymida febrifuga</i> (Roxb.) Juss.	Meliaceae	Leucorrhoea, menstrual disorders, uterus cleaning, anaemia
161	<i>Spermadictyon suaveolens</i> Roxb	Rubiaceae	Wounds, diabetes, arthritis
162	<i>Sterculi aurens</i>	Sterculiaceae	Stomach-ache
163	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	Haemorrhage, teeth disorders, blood pressure, gingivitis, blood sugar, glycosuria
164	<i>Tamarindus indica</i> L.	Fabaceae	Conjunctivitis, Pain relief of pregnant woman, excessive menstruation
165	<i>Tephrosia purpurea</i> (L.) Pers.	Fabaceae	Stupefying fish, postnatal problems, leucorrhoea, krait bites
166	<i>Terminalia arjuna</i> (Roxb.) W. & A.	Combretaceae	Diabetes, obesity, heart disease, backache, leucorrhoea
167	<i>Terminalia bellirica</i> (G.) Roxb.	Combretaceae	Cooling agent, gastric
168	<i>Terminalia zeylanica</i> Heurck & Muell.Arg. (<i>Terminalia chebula</i>)	Combretaceae	Swelling, wounds, skin diseases, burns
169	<i>Toona ciliata</i> M. Roem. (<i>Cedrelatoona</i>)	Meliaceae	Massages
170	<i>Trichosanthes bracteata</i> (Lam.) Viogt	Cucurbitaceae	Asthma, lung diseases.
171	<i>Tridax procumbens</i> L.	Asteraceae	Wounds
172	<i>Typha elephantine</i> Roxb.	Typhaceae	Wounds, aphrodisiac
173	<i>Urena lobata</i> L.	Malvaceae	Snake, scorpion bite
174	<i>Vitex negundo</i> L.	Lamiaceae	Catarrhal fever, foetid discharges, diarrhoea, cholera, fever, haemorrhages, cardiac disorders
175	<i>Vitex peduncularis</i> Wall. ex Schauer	Lamiaceae	Hypertension, chronic, kidney disease, snakebite, malaria, sciatica, leucorrhoea
176	<i>Woodfordia fyticosa</i> (L.) Kurz	Lythraceae	Dysentery, liver diseases, diarrhoea
177	<i>Wrightia arborea</i> (Dennst.) D.J. Mabberley (<i>Wrightia tomentosa</i> Roxb.)	Apocynaceae	Jaundice, diabetes, malaria
178	<i>Xanthium strumarium</i> Linn.	Asteraceae	Cancerous wound, rheumatism, leukoderma

Table 1 continued...

Table 1 continued...

179	<i>Zehneria scabra (L.f.) Sonder.</i>	Cucurbitaceae	Malaria, Snake bite, diabetes
180	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Cold, cough, tuberculosis
181	<i>Ziziphus mauritiana</i> Lam. (<i>Ziziphus jujuba</i> Mill.)	Rhamnaceae	Anthelmintic, vomiting, menorrhagia, gastric problem, kidney stone
182	<i>Ziziphus xylopyrus</i> (Retz.) Willd.	Rhamnaceae	Menorrhagia, leucorrhoea, spermatorrhoea.

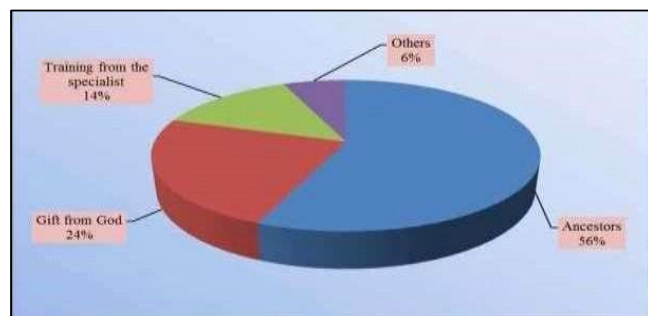


Fig. 2 : Status and role of traditional healer.

Baigas tribal healers have several concerns, some of which are: strict laws governing the collection of medicinal materials; inadequate protection for intellectual property; lack of successors; lack of interest among younger generations; knowledge loss; disagreements with conventional wisdom; lack of acceptance and incompatibility of traditional ownership principles with modern laws.

In the Korba area of Chhattisgarh, it is common practice to make use of local flora in the context of traditional medicinal practices (Tables 1 and 2, Fig. 2) show that 59.21 percent of traditional herbal healers believe that the ability to heal comes from one’s ancestors. In comparison, 19.74 percent of herbal healers believe that the ability to heal is an accidental gift from God. 14.47 percent of herbal healers believe that the ability to heal comes from training from specialists. Moreover, the inhabitant largely depends on these ethno-medicinal plants for their health care and nutrition (Kumar *et al.*, 2017a,b,c; Mishra *et al.*, 2022). Others make up 6.58 percent of the total. The majority of Baigas believe that sickness is caused either by the fury of particular divine spirits or by the emergence of demonic spirits. In traditional tribal societies, it is commonly believed that sickness is brought on either by the disobedience of certain taboos or by the angry spirits of the dead. Every transgression that is committed by them will result in sickness as a standard retribution from these demons (Verma *et al.*, 1993). Traditional healers carry out rituals steeped in both magic and religion in an attempt to find a cure for epidemics whenever they occur (Table 3). Even highly educated members of the tribe would not disregard the advice of a traditional healer (Vaidiya or Diwars) because of how

Table 2 : The Region’s Top Ten Dominant families and the number of species they contain.

S. no.	Name of family	No of species
1.	<i>Amaranthaceae</i>	5
2.	<i>Apocynaceae</i>	8
3.	<i>Asteraceae</i>	5
4.	<i>Cucurbitaceae.</i>	11
5.	<i>Euphorbiaceae.</i>	5
6.	<i>Fabaceae</i>	23
7.	<i>Lamiaceae</i>	8
8.	<i>Malvaceae.</i>	10
9.	<i>Moraceae</i>	6
10.	<i>Rutaceae</i>	5

Table 3: Different Habits of Ethno medicinal Plants

S. no.	Habit	No. of species
1.	Climbers	24
2.	Fern	2
3.	Herb	50
4.	Shrub	39
5.	Tree	67
	Total	182

Table 4 : Status of Traditional Healer.

S. no.	Variables	No.
1.	Inheritance from elder persons (ancestors)	45
2.	Accidental detection gift from God	15
3.	Training from the specialist	11
4.	Others	5
	Total	76

firmly ingrained this idea is among the tribal people (Fig. 2 and Table 4). The utilization of medicinal plants provides practically all of the indigenous Baigas people’s healthcare needs. The utilization of ethno-medicinal plants, which significantly contribute to human health, is one of the most important and significant ways that people directly benefit from biodiversity (Kumar *et al.*, 2017d; Bijalwan *et al.*, 2017, 2019; Kumar *et al.*, 2021; Barya *et al.*, 2022; Pandey *et al.*, 2022; Rawat *et al.*, 2022; Thakur *et al.*, 2022a,b,c; Thakur *et al.*, 2023). In most cases, they treat diseases that are common in the region, such as malaria, jaundice, fractures, coughs, stomach pains, dysentery,

diarrhea, ringworm skin disease and many more. In spite of the growing impact of the contemporary medical system, the usage of native medicinal plants continues to be an important source of medicine for underprivileged people. Some individuals who cannot afford modern medical care and live in impoverished conditions are forced to rely, either directly or indirectly, on ancient techniques of treating a variety of illnesses (Bijalwan *et al.*, 2020, 2021).

Conclusion

Recognised as the industrial centre of Chhattisgarh, the Korba district is home to a substantial Korba tribal population. The majority of them are farmers who depend on both agricultural and forest products. Ninety-five Korba traditional healers claimed to have treated 110 ailments with 182 ethno-medicinal herbs. It was found that only men possess a thorough comprehension of the oral traditions that are used in traditional healthcare practices. The traditional medicine of the Korba, like that of other ethnic groups in Chhattisgarh has been passed down orally for a very long time. Because of the increasing use of allopathic medicine, mining-related displacement, and advancements in technology, it is fast declining. These upheavals are causing an increasingly small amount of traditional indigenous wisdom to disappear. The Korba region boasts a diverse and abundant array of ethno-medicinal plants as a result of its unique topography and altered climate. The traditional healers then obtain their own medications from nearby agro-woods climate zones. Furthermore, the social customs and limitations surrounding the use of restorative herbs and the preservation of their sustainable usage are tied to these challenges. They make extensive use of wild plants in their stories, symbolism, and other socio-social rituals. They understand how to use and safeguard the assets of the plant well. It is commendable that they retain ethno-medical knowledge about plants in their memory. This is the first scientific and ethnobotanical classification study conducted by an expert in this ethnic group. Therefore, authentic recording of the traditional knowledge and ethno-formulations was an urgent requirement in the review area, which has now been met to a certain extent.

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