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## Study of plant biodiversity of Rewa district Madhya Pradesh India and its medicinal uses

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**Abstract**

Rewa is rich in biodiversity of medicinal plants. The forest area is about 40% of the total area of Rewa. The tribals reside forest area. They are used medicinal plants by traditional knowledge. Traditional medicinal practitioners known as vaidyas or kavirajas from the primary health care provider in rural Rewa. The objective of this present study was to conduct a value addition survey amongst tribal of Piprahi and around the district of Rewa. Knowledge about to conserve these natural resources is very important. If all the people know about our natural resources & its important in our life by training or another sources than save it for value addition. If one sps. save per people by conserve it for value addition than disease free nature obtained. Information on 95 plants sps. was obtained which were used by tribal vaidyas to treat various ailments given the table 1. These medicinal plants belong to 92 genera and 49 families. All plants were grown or cultivated in home steads or fields as ornamental plant, shade giving plants, timber yielding plants, home construction plants, medicinal plants, vegetable, fruits etc. The various plant part used included whole plants, leaves, stems, roots, tuber, barks, flower, fruits & seeds. Traditional and ethnic knowledge generated from such leads has played most significant role in the discovery of novel product as well as newer ideas about conservation of natural resources. This paper deals the biodiversity of plant which is used by tribals in Piprahi, Rewa.

**Keywords:** Medicinal plant, traditional knowledge

**Introduction**

The knowledge of medicinal plants has mainly been gathered by the people in the form of tradition and experiences and inherited over the centuries to the future generation. It is extremely important to save this traditional knowledge of biological heritage and explore new resources. The district has rich biodiversity still in the natural form. The climatic conditions of this area support to the survival of flora and magnificent nature. About 10000 plant sps. are traditionally utilized all over the country for health care food and other day to day material requirements. Traditional and ethnic knowledge generated from such leads has played most significant role in the discovery of novel product as well as newer ideas about conservation of natural resources.

Plants are always considered as a primary source of drugs in traditional and alternative system of medicine in various forms such as crude form, juice, decoction, and crude extracts. About 80% people of the world, particularly in the rural areas of developing countries, continue using traditional resources in healthcare (Poonam and Singh, 2009) <sup>[1]</sup>. Indian subcontinent is renowned for its cultural and plant biodiversity where large numbers of people are still living in tribes. These tribal people possess a pool of undisclosed, ethnomedicinal, and ethnopharmacological information regarding the flora of their surroundings, which may prove to be very helpful in rural community with its advantage. Natural wealth as well as the undisclosed ethnopharmacological information and the tribal cultures have been decreased remarkably at a disturbing rate due to change in life style, unintentional developmental programs, and mounting recent civilization. Negligence by the youth also influences the traditional knowledge (Pandey and Shukla, 2003 and Semwal, 2005) <sup>[2, 3]</sup>. Therefore, it is necessary to discover and document this exceptional, original, and conventional information of the ethnic population, before it disappears with the knowledgeable persons. It is also for the establishment of these conventional principles at the national and international level realizing the recent global trends (Kala, *et al.* 2006) <sup>[4]</sup>.

Report of Ambasta (1986) [5] on common medicinal plants is valuable in underlining importance of plants for treatment of various diseases. A survey of literature indicates that Dwivedi (2003) [6], Jain (1963) [7], Jain and Goel (1987) [8] and Khan *et al.* (2008) [9] has made important contribution in this field.

### Materials and Methods

Vaidyas were interviewed with the help of semistructured questionnaire and employing the guided field walk method were the information takes the observer on a guided tour and points out the various medicinal plants used by traditional knowledge and describe their uses. The field survey was planned in spring season and also in monsoon season when plants bloom and show extensive growth with the view of study their natural habitat and distribution. This in turn eased the process of identification of different plant species. The identification of plant material was carried out with the help of (Mudgal *et al.* 1997 and Khan *et al.* 2008) [10, 9]. The traditional knowledge about the plants was obtained through conversations and discussions with the learned people of the

area regarding their local names plant parts used purpose of use and curative properties.

### Study area

Piparahi forest is located in Hanumana tehsil of Rewa district in Madhya Pradesh, India. It is situated 25 km away from sub-district headquarter Hanumana and 116 km away from district headquarter Rewa. Due to large forest cover (48%) and favorable environmental condition this district is rich in plant diversity.

### Results and Discussion

Information on 92 plants sps was obtained. Which were used by tribal vaidyas to treat various ailments given the table below.

These plants belong to 92 genera and 49 families. All plants were grown or cultivated in home steads or fields as ornamental plant, shade giving plants, timber yielding plants, home construction plants, medicinal plants, vegetable, fruits etc. The various plant parts used included whole plants, leaves, stems, roots, tuber, barks, flower, fruits and seed.

**Table 1:** Medicinal plant & their parts used in different disease

Sl. No.	Botanical name	Vernacular name	Family	Parts used	Diseases/ Uses
1	<i>Acacia nilotica</i> Linn	Babul	Mimosaceae	Bark, fruit	Urinogenital disease, mouthulcers
2	<i>Acalypha indica</i> Linn	Muktajuri	Euphorbiaceae	Whole plant	Expectorant, bronchitis, pneumonia, snake bites
3	<i>Adhoda vasica</i> Linn	Adoosa	Acanthaceae	Whole plant	Bronchitis, cough, anemia, asthma, chest pain.
4	<i>Aegle marmelos</i> Linn	Bel	Rutaceae	Leaf, Root, fruit	Stomach troubles, intermittent fever, diarrhoea, blood dysentery
5	<i>Achyranthes aspera</i> Linn	Chirchita	Amaranthaceae	Leaf, stem	Otorrhoea, wounds, injury
6	<i>Ageratum conyzoid</i> Linn		Asteraceae	Leaf	Haircarelotion, nerve toni, dysentery, diarrhoea
7	<i>Alocasia indica</i> (Lour)	Mankanda	Araceae	Leaf, tuber	Astringent, piles, constipation
8	<i>Amaranthus tristis</i> Trin	Chaulai	Amaranthaceae	Young stem, leaf	Anemia, eye troubles, blood purifier
9	<i>Anthocephalus chinensis</i> Wall	Kadamb	Rubiaceae	Bark	Tonic.
10	<i>Andrographis paniculata</i> Wall	Kalmegh	Acanthaceae	Leaf	Asthma, bronchitis, antihelminthic, stomachic
11	<i>Argemone mexicama</i> Linn	Peeli kateeli	Papveraceae	Leaf, seeds	Jaundice, expectorant, demulcent.
12	<i>Artabotrys hexapetalus</i> Linn	Kanchampa	Annonaceae	Leaf	cholera
13	<i>Artocarpus heterophyllous</i> Roxb	Kathal	Moraceae	Fruit, root, latex, rachis.	Diarrhoea, glandular swelling
14	<i>Artocarpus lakoocha</i> Roxb	Dephol	Moraceae	Bark	antiseptic
15	<i>Azadirachta indica</i> , a. juss	Neem	Meliaceae	Leaf, stem	Fever, skin disease, diabetes, liver troubles etc.
16	<i>Azolla pinnata</i> R.Br	Azolla	Azollaceae	Leaf	Tonic.
17	<i>Bacopa monnieri</i> Linn	Kachnar	Scrophullariaceae	Whole plant	Nerve tonic, asthma, snake bite.
18	<i>Bauhinia variegata</i> Linn	Kachnar	Casalpinaceae	Bark, root	Leucorrhoea, carminative
19	<i>Bombax ceiba</i> Linn	Simq	Bombaceae	Flower	Snake bite, stimulant, aphrodisiac, astringent
20	<i>Bryophyllum pinnatum</i> Roxb	Patharachatta	Crassulaceae	Leaf	Kidney stone, headache.
21	<i>Butea monosperma</i> Kuntze	Palas	Fabaceae	Leaf, bark, seed, latex	Antihelminthic, astringent, piles, tonic.
22	<i>Cajanus cajan</i> Linn	Arhar	Fabaceae	Leaf, seed	Jaundice, stomach disorder.
23	<i>Calotropis gigantea</i> Linn	Madar	Asclepiadaceae	Leaf, stem, latex	Chest pain, eye troubles, skin diseases.
24	<i>Cannabis sativa</i> Linn	Ganja	Cannabinaceae	Leaf, flower	Diarrhoea, dysentery, narcotic.
25	<i>Capsicum annum</i> Linn	Mircha	Solanaceae	Fruit,leaf	Carminative, lumbago, rheumatism.
26	<i>Carica papaya</i> Linn	Papita	Caricaceae	Latex, fruit, root	Antihelminthic, dog bites, stomachic, diuretic.
27	<i>Cassia fistula</i> Linn	Amaltas	Caesalpinaceae	Bark, fruit, root	Chornic fever, ringworms, rheumatism.
28	<i>Centella asiatica</i> Linn	Bramhi	Apiaceae	Leaf	Stomachic, condtipation, liver tonic.
29	<i>Chenopodium albrun</i> Linn	Saag	Chenopodiaceae	Leaf	Leucoderma, antihelminthic
30	<i>Cinnamonaum bejologhota</i> Linn	Tejpatha	Lauraceae	Leaf, bark	Cough and cold, toothache.
31	<i>Citrus reticulate blanco</i>	Atarra	Rutaceae	Fruit	Blood purifier, diarrhoea.
32	<i>Clerodendron viscosum</i> Vant	Bhant	Verbenaceae	Leaf, root	Swellings, stomachic, malaria.

33	<i>Colocasia esculenta</i> Linn	Ghuyan	Araceae	Stem, corm	Styptic, stimulant.
34	<i>Coriander sativum</i> Linn	Dhania	Umbelliferae	Leaf, Seed	Digestive, liver Tonic, check vomiting, aphrodisiac.
35	<i>Cucumis sativus</i> Linn	Khira	Cucurbitaceae	Fruit, seed	Tonic, cooling, demulcent, diuretic.
36	<i>Cucurbita pepo</i> Linn	Kumrha	Cucurbitaceae	Leaf, seed	Antihelminthic burns.
37	<i>Curcuma domestica</i> valeton	Haldi	Zingiberaceae	Rhizomes	Stimulant, tonic, carminative, sprains, conjunctivitis.
38	<i>Cynodon dactylon</i> Pers	Doob	Gramineae	Whole plant	Piles, chronic, dysentery, wounds, blood in urine
39	<i>Catharanthus roseus</i>	Sadabahar	Rosaceae	Leaf	Ulcer, cancer.
40	<i>Dalbergia sisso</i> Roxb	Shisham	Fabaceae	Leaf, root	Astringent.
41	<i>Datura metal</i> Linn	Datura	Solanaceae	Leaf, root	Fever, asthma, skin diseases
42	<i>Daucas carota</i> Linn	Gajar	Umbilliferae	Root	Stimulant, diuretic, carminative.
43	<i>Dillenia indica</i> Linn	Chalta, Karambel	Dilleniaceae	Leaf, bark, fruit	Colling, abdominal pain
44	<i>Dioscorea alata</i> Linn	Ratalu	Dioscoracase	Tuber	Piles.
45	<i>Eclipta prostrata</i> Linn	Bhrinjraj	Asteracea	Leaf	Hypertension, constipation.
46	<i>Elephantopus scaber</i> Linn.	Ban tambakhu	Asteraceae	Leaf, root	Diarrhoea, dysentery, stomachic, arrest vomiting.
47	<i>Embllica officinalis</i> Gaertn	Amla	Euphorbiaceae	Leaf, bark, fruit	Constipation, bleeding, piles, cough, anemia, nerve tonic, jaundice, asthma
48	<i>Eugenia jambolana</i> Linn	Jamun	Myrtaceae	Leaf, bark, fruit, seeds	Bed breadth, burning sensation in the body, blood in stool, diabetes
49	<i>Euphorbia pulchirrima</i> Wild	Lalpatta	Euphorbiaceae	Latex	Skindisease
50	<i>Ficus bengalensis</i> Linn	Bargad	Moraceae	Root, fruit, latex	Dysentery, diabetes, boils
51	<i>Ficus hispida</i> Linn	Katgular	Moraceae	Leaf, bark, fruit, latex	Ringworm, purgative, boils
52	<i>Ficus carica</i> Linn	Domar	Moraceae	Seed, leaf	Kidney stone, diabetes, small pox
53	<i>Gardenia jasminoides</i>	Gandhraj	Rubiaceae	Leaf, root, fruit	Antiseptic, nervous Ellis Disorders, stimulant
54	<i>Gmelina arborea</i> Roxb	Gamahar	Verbenaceae	Leaf	Skin diseases.
55	<i>Hibiscus rosasinesis</i> Linn	Gudhal	Malvaceae	Leaf, flower, root	Hair care lotion, gonorrhoea, aphrodisiac, amenorrhoea
56	<i>Helianthus annus</i> Linn	Surajmukhi	Asteraceae	Leaf, flower, seed	Kidney stone, malarial fever, cough and cold.
57	<i>Ipomea batatus</i> Lamk	Sakarkand	Convolvulaceae	Leaf	Headache, hypertension
58	<i>Jatropha gossypifolia</i> Linn	Ratanjot	Euphorbiaceae	Leaf, latex, bark	Stomachic, ulcers
59	<i>Jatropha curcas</i> Linn	Ratanjot	Euphorbiaceae	Leaf	Antiseptic, antihemorrhagic
60	<i>Mangifera indica</i> Linn	Aam	Anacardiaceae	Leaf, Flower, Fruit	Tonic, diuretic, rheumatism, burus, diabetes
61	<i>Mentha arvensis</i> Linn	Pudina	Labiatae	Leaf	Antihelminthic, Irregular mensuration, Rheumatism, diuretic
62	<i>Michelia champaca</i> Linn	Champa	Magnoliaceae	Leaf, root, flower	Gonorrhoea, stomachic, purgative, eradicating lice.
63	<i>Mimosa pudica</i> Linn	Lajwanti	Mimosaceae	Whole plant	Piles, boils, sores, aphrodisiac.
64	<i>Momordica charantia</i> L	Kerala	Cucurbitaceae	Fruit, leaf	Stomachic, carminative, rheumatism.
65	<i>Moringa oleifera</i> Lam	Munga	Moringaceae	Bark, fruit	Fever, rheumatism, liver diseases, antipyretic.
66	<i>Murraya koenigii</i> L	Meethi neem	Rutaceae	Leaf	Diarrhoea, dysentery, premature graying of hair.
67	<i>Murraya paniculata</i> Jack	Kamini	Rutaceae	Leaf	Stimulant, astringent, rheumatism
68	<i>Lawsonia inermis</i> Linn	Mehandi	Lythraceae	Leaf bark	Skin diseases, jaundice, and astringent.
69	<i>Leucas aspera</i> Linn	Chhota Halkusa	Labiatae	Leaf, flower	Anemia, jaundice, asthma, itch, memorrhagia
70	<i>Linum usitatissimum</i> Linn	Alsi	Linaceae	Seeds	Demulcent, rheumatism, gonorrhoea
71	<i>Nerium indicum</i> Mill	Kaner	Apocynaceae	Leaf, bark, root	Snake bites, ulceration, skin disease.
72	<i>Nyctanthes arbortristis</i> Linn	Harsingar	Oleaceae	Leaf, Bark	Skin disease, malarial fever, rheumatism, antihelminthic.
73	<i>Nymphaea alba</i> Linn	Kamal	Nymphaceae	Root	Astringent, dysentery
74	<i>Ocimum sanctum</i> Linn	Sada tulsi	Lamiaceae	Leaf, root	Bronchitis
75	<i>Ocimum sanctum</i> Sp	Kala tulsi	Lamiaceae	Leaf	Cough and cold, cancer.
76	<i>Ocimum basilicum</i> Linn	Babui tulsi	Lamiaceae	Leaf	Cough and cold fever.
77	<i>O. canum</i> Linn	Bantulsi	Lamiaceae	Seeds	Liver troubles, jaundice.
78	<i>Oxalis corniculata</i> Linn	Khatti booti	Oxaliadaceae	Whole plant	Stanachie, piles.
79	<i>Piper betle</i> Linn	Pan	Piperaceae	Leaf, root	Inducingsterility in women. Carminative, indigestion.
80	<i>Phyllanthus fraternus</i> Web	Bhuiamla	Euphorbiaceae	Whole plant	Leucoderma, astringent, jaundice, stomachic.
81	<i>Plumeria rubra</i> Linn	Dulanchampa	Apocynaceae	Fruits	Stimulant, gonorrhoea, rheumatism.
82	<i>Pongamia pinnata</i> Vent	karanj	Caesalpinacea	Seeds	Rheumatism.
83	<i>Psidium guajava</i> Linn	Amrud	Myrtaceae	Leaf	Mouthsores, antihelminthic, infantile diarrhea, digestive.
84	<i>Punica granatum</i> Linn	Anar	Punicace	Leaf, bark	Dysentery, jaundice, diabetes, antihelminthic.
85	<i>Ricinus communis</i> Linn	Arand	Euphorbiaceae	Leaf, seed	Rheumatism, headache.
86	<i>Rosa sinesis</i> Linn	Gulab phul	Rosaceae	Flower	Liver troubles.

87	<i>Saraca asoca</i> Roxb	Ashok	Caesalpinaceae	Leaf, bark	Cardiotonic, blood dysentery.
88	<i>Smilax macrophylla</i> Roxb	Kumarika	Liliaceae	Leaf, young stem	Diabetes
89	<i>Solanum nigrum</i> Linn	makoi	Solanaceae	Leaf, fruit	Stomachic, Rheumatism
90	<i>Spondias pinnata</i> Kurtz	Ambara	Anacardiaceae	Root, bark, fruit	Dysentery, diarrhoea, rheumatism, Gonorrhoea, Regulating Mensuration
91	<i>Swertia chiaryita</i> Roob	Chirata	Amaranthaceae	Leaf	Fever, Antihelminthic
92	<i>Tagetes patula</i> Linn	Genda	Asteraceae	Leaf	Malaria fever

The paper attempts to provide comprehensive information on diversity distribution and uses of medicinal plants in the studied area. The rich biodiversity may be due to mild climatic condition and diverse habitats, along with human habitats with diverse culture and communities that utilize the diversity for the treatment for various ailments. Utilization of species of medicinal plants indicated a high degree of threat to these species. If indiscriminate use of medicinal plants and their various parts continues many sps may ultimately disappear from their natural habitats, especially medicinal plants with multiple uses (Khan *et al.*, 2008) [9]. A commendable but insufficient conservation initiative of medicinal plants is being done by central and state govt which needs to strengthen.

### Conclusion

The medicinal plant used by tribals has been used by them for treatment of diverse ailments by traditional knowledge. Many of these plants are becoming endangered. Scientific studies should be conducted on these plants.

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