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Ethnomedicinal importance of some plants of Family Leguminosae

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Abstract

The present study focuses on ethno medicinally important plants of family Leguminosae in Raipur district. Ethnomedicine basically deals with the traditional use of plants by aboriginal people to cure different ailments. The plant family Leguminosae is one of the largest family of flowering plants. Its use traditionally is very diverse in various ways as food, medicine, Timber, Non-Wood Forest Produces(NWFPs) etc. The work emphasizes on medicinal importance of some plants of this family which has been used traditionally. The study area is Raipur district in the state of Chhattisgarh situated in the central part of India. Information is gathered from various ethnic groups of the area, also literature is taken into consideration for the purpose. Plants like *Hardwikia binnata* (Anjan), *Trigonella foenum-graecum* (Methi), *Cyamopsis tetragonoloba* (Gawarphalli), *Sesbania grandiflora* (August), *Cajanus cajan* (Arhar), *Dolichos biflorus* (Kulthi), *Psoralea corylifolia* (Babchi), *Butea monosperma* (Palash) are used in various traditional medicine. *Cajanus cajan* is vastly cultivated as a pulse crop but it is also used in colic, convulsions and leprosy. *Butea monosperma* is used in various skin diseases, in ulcer, piles, and haemorrhages. *Psoralea corylifolia* is used in skin fungal infections. Likewise *Dolichos biflorus i*s used in preparations made for post natal care. The information from this study would aware people about medicinal properties and usage of these plants. Also conservation practices would be encouraged due to its importance.

Modern world of advances and discoveries in Science and technology have empower Man in all basic aspects of life including health care. Yet there is a major percentage of people living indifferent to present world. They have different practices and knowledge to deal with day to day requirements of life and in their healthcare and healing practices. Even before man, animals were observed using vegetable products for

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ailments[1]. Ethno-medicine is one such term which covers the traditional knowledge of ethnic groups about use of plants and plant products in curing various diseases and ailments. Ethno-medicine is simply the study of medical system or healing practices of a cultural group, the cross-cultural comparison of such system[2].

Most of the plants in our vicinity possess medicinal properties. In present investigation plants studied for their ethno-medicinal properties belongs to family Leguminosae of Angiosperms. Leguminosae is third largest family in flowering plants. Leguminosae comprises of three subfamilies naming Papilionoideae, Caesalpinioideae and Mimosoideae. Legumes have diverse uses as crops, forages, manure, as timber, in socioreligious ceremonies; they synthesize natural products like drugs, dyes, fibres, gum, poisons etc.

The survey area is Raipur district present in the state of Chhattisgarh which occupies Central part of India.State has 44% of its geographical area under forest cover, which is the 3rd largest forest covers in the country.Raipur is situated on 22° 15'- 21° 14' North latitude and 82° 6'- 81° 38 East longitude'. The type of soil in the area is mainly red soil and alluvial soil. Main River of the district Raipur is Kharun.

Ethnobotanical survey was conducted in the area during June 2015- May 2016. Method used here is personal visits and interviews. Information like application, part of plants used etc were noted down. Information about the ailments was gathered by interviewing people of all age groups of the studied area. Plants belonging to family Leguminosae were identified with the help of local names provided by people and folk healers. Also the plant sample collected from the area was confirmed by the locals for their vernacular name. Plants are then identified by the help of flora of Hooker[3] (vo-II), Verma,[14], Flora of Verma,[15], flora of Pullaiah, & Ramamurthy[10]. Also information from literature[12], Kirtikar and Basu[9], Jain[5,6], Joshi[7], Khare[8], Jadhav[4] from various sources is also considered.

A total of 110 local people were interviewed during the survey including 16 folk healers. Out of 110 people 65 people were males and 45 were female. People of different age groups varying from 20-70 years were interviewd. 72 people more than 55 years of age while rest of all were between 20-55 years. Sources of Plants being used was open forests, grasslands, some were purchased from the local markets and some are cultivated. At the end of the interview, the informants were also asked to answer the following questions about the sources of their knowledge. For interview following are some questions that were asked to the folk healers and the locals.

- *Which part of the plant do you use?*
- *How do you prepare it?*
- *What is it good for?*
- *Whom would you recommend it to?*
- *"Where did you get your knowledge about plants?" and "Did anybody show or tell you something about plants*

Following are the plants recorded during the survey with their chemical constituents. Description of chemical constituents is given with help of references:

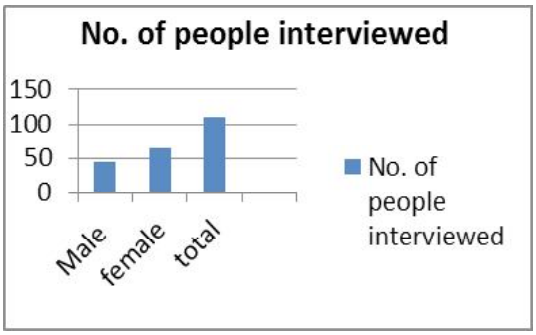


Chart 1: Total number of respondents genderwise

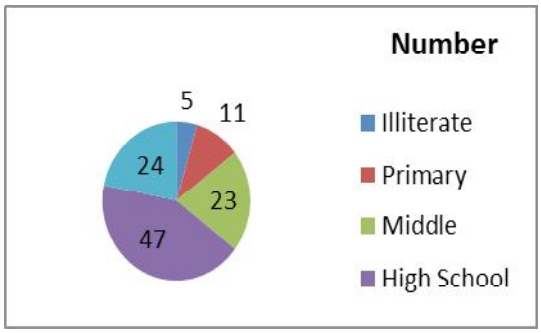


Chart 2: Education of Respondents

S. no.	Common Name	Botanical name	Part used	Diseases	Chemical constituents
1.	Babool	*Acacia arabica* Willd.	Stem, Bark	Cough, Dental troubles, Leucorrhoea	Tanins (Bark), Galactose, l-arabinose, aldobiouronic acids, kaempferol, iso quercitrin, leucocyanidin.
2.	Shikakai	*Acacia concinna* DC	Leaves, Fruits	Gonorrhoea, wounds, skin diseases	Lupeol, Alpha spinasterol, acacic acid lactone
3.	Katha	*Acacia catechu* Willd.	Bark	Boils, ulcers, Dental trouble	Hepato protective principle-Cyanidanol, Catechin
4.	Safed Kikar	*Acacia leucophloea* Willd.	Bark	Bronchitis	Leucophleol, leucophleoxol, leucoxol.
5.	Kachnar	*Bauhinia racemosa* Lamk.	Bark	anti inflammatory, skin diseases	Octacosane, beta-amyrin, betasitosterol
6.	Palash	*Butea monosperma* (Lam.) Taub.	All parts	antiviral, jaundice, Piles	Butin, butrin, isobutrin, palastrin, coreospin, monospermoside, sulphurein
7.	Arhar	*Cajanus cajan* (L.) Millsp.	Leaves, Seeds	Wounds, arbortifacient	Riboflavin, Pyridoxin, isoflavone, cajanole

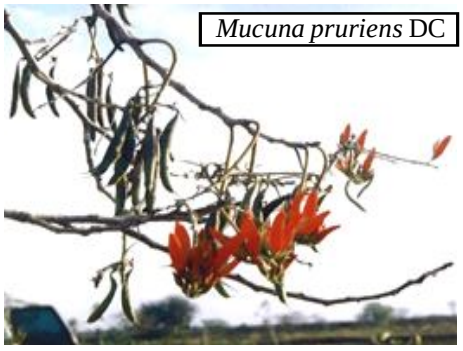
8.	Senna	*Cassia angustifolia* Vahl.	Leaves	Constipation, typhoid, anemia	Rhein, aloe-emodin, Kaempferol, isormamnetin
9.	Kasondi	*Cassia occidentalis* L.	Leaves	Skin diseases	Sennosides, anthraquinones, galactomannan, cassiolin, emodin
10.	Charota bhaji	*Cassia tora* L	Leaves, pods	Jaundice, dysentry	Chrysophenol, aloe-emodin, flavones glycoside and sennoside.
11.	Amaltas	*Cassia fistula* L.	All parts	Leprosy, rheumatism, cough	Anthraquinone, rhein, sennosides A & B, Barbaloin
12.	Gawarphalli	*Cyamopsis tetragonoloba* (L.)	Pods, Gum	Night blindness, asthma, Diabetes	Galactomannan, 3-epikatonic acid
13.	Sheesham	*Dalbergia latifolia* Roxb.	Bark	Leprosy, Diarrhoea	Hentriacontane, latifolin, beta-sitosterol.
14.	Shaalparni	*Desmodium gangeticum* DC	Root	Fever, vomiting, stomach disorders	Pterocarpanoids, gangetin, gangetinin, desmodin.
15.	Kulthi	*Dolichus biflorus* L.	Seeds	postnatal preparation, colic	Streptogenin, globulin
16.	Anjan	*Hardwickia binata* Roxb.	Bark	Swelling, gonorrhea	Betasitosterol, taxifolin, eriodictyol, catechin, mopanol
17.	Masura	*Lens esculenta* Moench	Seeds	Ulcers, Constipation	itaconic acid, arbutin
18.	Laajwanti	*Mimosa pudica* L	Leaves	Diarrhoea, Dysentery. piles	Mimosine, turgorin, C-glycosylflavones, C-rhamnosylorientin
19.	Kevaanch	*Mucuna pruriens* DC	Root, Fruits	Kidney stone, Snake bites, infertility	Mucunine, mucunadine, mucunadinine, prurieninine, pruriendine.
20.	Gangaimli	*Pithecellobium dulce* (Roxb.)Benth	Bark	Constipation, fever	Alpha-spinasterol, beta-D-glucoside, tannins, lignoceric acids

21.	Babchi	*Psoralea corylifolia* L.	Fruits, Seeds	Bone disorder, Eczema, leucoderma	Psoralen, isopsoralen, Bavachinin A
22.	Vidarikand	*Pueraria tuberosa* DC	Tuber	Cardiac tonic, promotes breast milk	Puerarin, daidzein, tuberosin
23.	Agastya	*Sesbania grandiflora* (L) Poiret	Leaves, Flower	Nightblindness, Improves eye vision	Nonacosan-6-one, Kaempferol-3-rutinoside, sapogeninoleanoic acid, grandiflorol
24.	Imli	*Tamarindus indica* L.	Bark, Leaves	astringent, rheumatic arthritis.	Flavone glycosides-orientin, vitexin, iso-orientin, tartaric acid, mallic acid.
25.	Sarphonk	*Tephrosia purpurea* Pers.	Roots	Dyspepsia, diarrhoea, cough	Chalcones, spinochalcones A & B, Flemistrictin
26.	Methi	*Trigonella foenum-graecum* L	Seeds	Colic, lactogogue	Trigonelline, gentianine, carpaine, sapogenins

Acacia arabica Willd

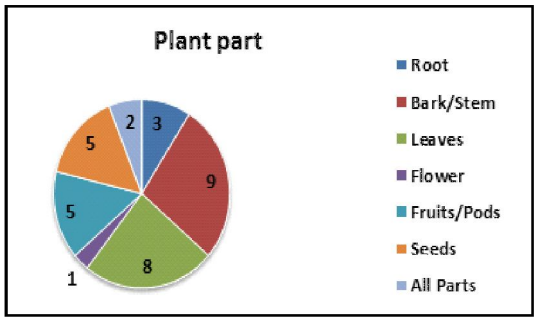
Mimosa pudica L.

Cassia fistula L.

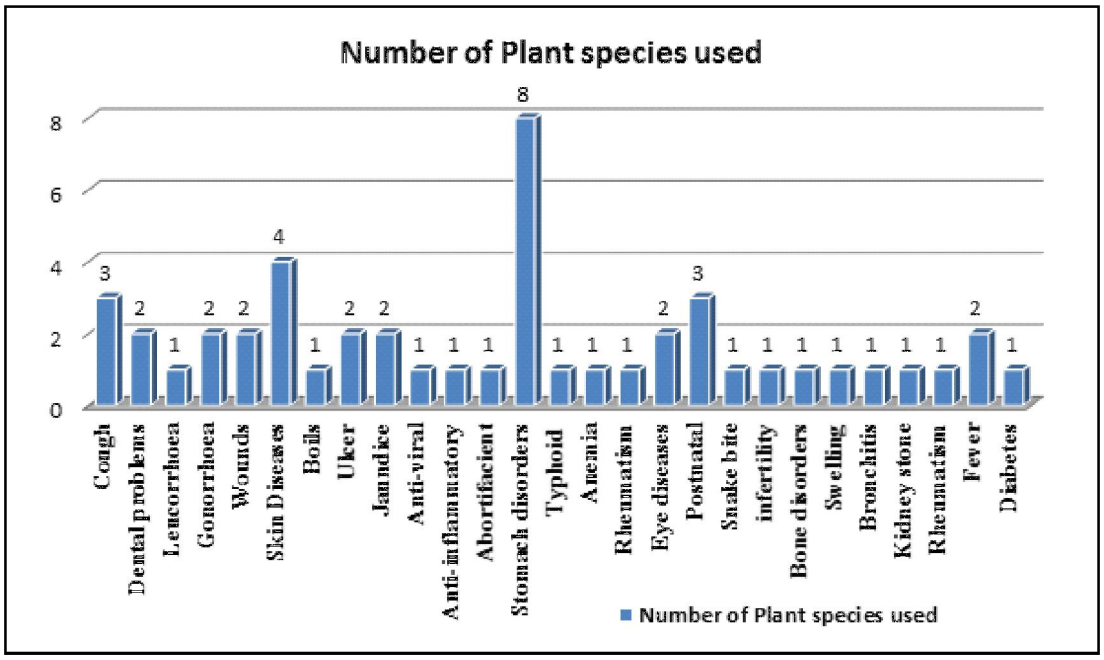


Mucuna pruriens DC

During the research a total of 15 plants were found to be used in traditional system of medicine in the study area. Different parts of plants are used in different herbal preparations. Roots of 5 plants, Bark of 9 plants, leaves of 8 plants, flowers of 1 plant, pods of 5 plants and seeds of 5 plants listed above are used in various preparations. Almost all parts of *Butea monosperma*, *Cassia fistula* and *Mucuna prureins* are found to be used in traditional medicine. Maximum number of plants (10) belong to family Papilionoideae, 5 Plants of Caesalpinioideae, and 6 plants of Mimosioideae.



Graph: Plant parts of family Leguminosae used as medicine, investigated in Raipur district of Chhattisgarh, during the year 2014-2016.



Number of plant species of family Leguminosae used in treatment of various diseases, investigated in Raipur district of Chhattisgarh, during the year 2014-2016.

In modern world also, there is a large amount of population which rely on ethno-medicine in different ailments especially in India. These remedies are substitution to allopathic system of medicine and shows remarkable capacity in curing a number of diseases. Traditional knowledge about herbal preparation can unveil scope of identification of active compounds present in plants being used for the purpose. They can help researchers

to find those compounds and make their use commercially as drugs. This would also help to conserve knowledge from the past provided by the ethnic groups. Documentation of such information so gathered would be used for future references.

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